NALGENE®

Labware

Bottles

Carboys

Filtration

Benchtop Labware

Centrifuge Tubes & Bottles

Tubing

Safety

Teflon® Products

Cryopreservation

I.C.T, S.L.
INSTRUMENTACIÓN CIENTÍFICO TÉCNICA

www.NALGENElabware.com

Low Particulate/Low Metal Bottles

382003, 381600 Series

Narrow-mouth bottles with a particle level of less than 20 particles per ml at 0.3µm and greater. LDPE bottles are excellent for ICP-MS reagent and standard storage. Specify the Teflon® FEP bottles for storing high-purity chemicals.

See the Bottles Section

InVitro™ Biotainers®

3025, 3005, 3110, 3230, 3415 Series

New 5L size. Transparent PETG Biotainers are sterile and ready to use. 500-ml to 2L sizes have molded-in handgrips. Space-saving square design is excellent for the storage of high value pharmaceutical and biological contents.

See the Bottles and Carboys Sections

Shrink Wrap Bands

312160 Series

The heat-shrink bands found on NALGENE Sterile Square PETG Media Bottles (Cat. No. 2019) are now available separately. Their tamper-resistant seal ensures the integrity of bottle contents. Excellent for manually protecting small production runs.

See the Bottles and Bottles/Carboys Accessories Sections

Storm Water Samplers and Mounting Kit

1100, 1120, 1160 Series

A new glass jar sampler permits efficient organic analysis. Its fluorinated upper structure prevents oil and grease from sticking. The improved mounting tube is easier to use, and keeps rainwater out of samples.

See the Environmental Section

50 ml Conical Bottom Filter Unit

564 Series

Features the Pall Supor® machV PES membrane, the optimal choice for tissue culture work. Fast, clean, convenient filtration of 20-50 ml of media or buffers.

See the Filterware Section

Tank Liners

333050, 343050 Series

These coex polyethylene film liners are specially-designed to fit NALGENE Cylindrical Tanks up to 200 gal. Open bag with flat bottom design eases fluid processing in single-use biopharmaceutical applications. Gamma-irradiated and non-sterile.

See the Tank Accessories Section

View this catalog online at:

www.NALGENElabware.com

Table of Contents

Icons Used in this Catalog

Autoclavable

Products listed with this icon may be autoclaved at a recommended cycle of 121°C, 15 psig (1 bar) for 20 minutes. Refer to the Reference Section for complete specifications and use information.

NALGENE Certified

Products with this icon meet specific criteria such as material toxicity, extractable levels, bubble point integrity, sterilization validation, and bioburden.
It is our guarantee.

USP VI

Demonstrates that the materials utilized are biologically compatible when tested according to the U.S. Pharmacopoeia XXIII, 1990 Class VI, Plastics Evaluation. As defined in the U.S. Pharmacopoeia XXIII, materials which pass the Class VI Plastic Evaluation are suitable as implantable materials.

Products bearing this icon are part of the Suppy Rewards program. For details, see the Supply Rewards page following the Catalog Number Index. Program valid in USA only.

Biohazard

Product listed with this icon meet OSHA Standard 29 CFR Part 1910.1030 for use as protection against blood-borne pathogens when used as directed.

Sterile

Products with this icon are supplied sterile by NNI.

Radiation

Products listed with this icon have been found safe for use with beta or gamma radiation-emitting substances when used as directed.

NEW

This icon represents new NALGENE products listed for the first time in our Labware Catalog.

CFC Free

As an environmental safeguard, selected products are filled with CFC-free urethane foam for insulation.

Teflon* Burst

Fluoropolymer products offer extreme chemical and corrosion resistance. Some are phthalate-free for high-purity applications.

- FEP (fluorinated ethylene propylene)
- Halar** ECTFE (ethylene-chlorotrifluoroethylene copolymer)
- Tefzel* ETFE (ethylenetetra-fluoroethylene)
- TFE (tetrafluoroethylene)
- PFA (perfluoroalkoxy)
- PVDF (polyvinylidene fluoride)

* Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

** Halar is a registered trademark of Solvay Solexis

CE 95

CE 95 denotes safety products that are in compliance with the "Personal Protective Equipment (EC Directive) Regulations 1992" (S.I. 1992/3139) for personal protective equipment (PPE) that is worn or held by an individual for protection against one or more safety and health hazards.

Right-To-Know Safety Wash Bottles

Right-To-Know Safety Wash Bottles now feature dripless operation. Pressure is relieved to prevent solvents from pooling on the benchtop.

Material Codes Used in this Catalog

ACRYLIC	polymethyl methacrylate (PMMA)
C.A.	cellulose acetate
C.N.	cellulose nitrate
ECTFE	Halar ECTFE (ethylene-chlorotrifluoroethylene copolymer)
ETFE	Tefzel ETFE (ethylene-tetrafluoroethylene)
FEP	Teflon FEP (fluorinated ethylene propylene)
FLPE	fluorinated polyethylene
FLPP	fluorinated polypropylene
FRP	fiberglass-reinforced polyester
HDPE	high-density polyethylene
LDPE	low-density polyethylene
LLDPE	linear low-density polyethylene
PC	polycarbonate
PE	polyethylene
PEI	polyetherimide
PES	polyethersulfone
PETG	polyethylene terephthalate copolyester
PFA	Teflon PFA (perfluoroalkoxy)
PMMA	polymethyl methacrylate (acrylic)
PMP	polymethylpentene (TPX)
PP	polypropylene
PPCO	polypropylene copolymer
PPO	polyphenylene oxide
PS	polystyrene
PSF	polysulfone
PUR	polyurethane
PVC	polyvinyl chloride
PVDF	polyvinylidene fluoride
SAN	styrene acrylonitrile
SFCA	surfactant-free cellulose acetate
TFE	Teflon TFE (tetrafluoroethylene)
TPE	thermoplastic elastomer
XLPE	cross-linked high-density polyethylene

Trademarks Used in this Catalog

Trademark	Owner
Airspray	Airspray International B.V. Holland
Benchmate	Zymark
Chemfluor	Saint-Gobain Performance Plastics Corporation
Clorox	Clorox Company
Halar	Solvay Solexis
Kynar	Elf Atochem
Lysol	National Laboratories
Mylar	DuPont
O-Syl	National Laboratories
PCR	Hoffmann-LaRoche, Inc.
Quatsyl	Pharmacia Enterprises S.A.
Roccal	Pharmacia Enterprises S.A.
Silastic	Dow Corning
Softube	Colder Products
Sorvall	Thermo Fisher Scientific
Spectronic	Thermo Fisher Scientific
Styrofoam	Dow Chemical Co., USA
Teflon	DuPont
Tefzel	DuPont
TPX	Mitsui & Co., Ltd.
Tygon	Saint-Gobain Performance Plastics Corporation
Tygothane	Saint-Gobain Performance Plastics Corporation
Vacutainer	Becton Dickinson
Viton	DuPont
Zymark	Zymark

Customer Service & Technical Support

How To Order

Where to Order – NALGENE® Brand labware is sold online at www.NALGENElabware.com or through authorized dealers. Those dealers are authorized to distribute both our reusable and disposable laboratory products, our reusable products only, or to specialize in serving educational customers.

Place your orders with laboratory supply dealers wherever you are located in the world. Contact NALGENE toll-free at 1-800-625-4327 (+1 585 586 8800) for a complete list of authorized NALGENE Labware dealers.

For lists of authorized NUNC dealers, call 1-800-625-4327.

Order by Complete Catalog Number – When ordering, always specify the NALGENE Brand catalog number (first three, four or five digits) and the size code (last four digits). Our dealers stock most of the labware product shown in this catalog. To get exactly the item you want, order by NALGENE brand catalog number, even if the particular product is not listed in your dealer's general catalog. Certain products have components that are available separately as spare parts. Contact NALGENE for details.

GSA Contracts – NALGENE Brand labware is available under GSA contract. Contact Customer Service for contract and ordering information through an Authorized NALGENE Labware Dealer.

Packaging – A "case" of NALGENE Labware is the original shipping container and represents the most economical unit of purchase. Except for those products listed "price, each", the smallest unit of purchase is the "package".

Prices – Prices shown in the domestic catalog are suggested list prices, current at the time of printing, and are in U.S. dollars. These prices are valid in U.S.A., Canada, Puerto Rico and Guam only. All other areas, please contact your local dealer for pricing. Prices and specifications are subject to change without notice.

Product Specifications – Detailed specifications are available from NALGENE. These may be used to describe product features and to set quality standards in purchase orders or requests for quotation. In North America, contact NALGENE Customer Service at 1-800-625-4327 for assistance, or email CustomerServiceDepartment@thermofisher.com.

Technical Support

If you require technical assistance in the use, operation or maintenance of NALGENE Brand products, call our Technical Service Center. Technical Applications Specialists can help answer your application and detailed specification questions.

In North America:
Tel: 1-800-625-4327
Fax: 1-800-625-4363 (1-800-NALGENE)
E-mail: NNItech@thermofisher.com

All Other Areas:
Tel +1 585-899-7198 (USA)
Fax: +1 585-899-7195
E-mail: intlmktg@thermofisher.com

ISO 13485 Certified.

The Thermo Fisher Scienfic Rochester, New York manufacturing facility extended its Quality System to be in compliance to ISO 13485 in May 2003. This upgrade supercedes the ISO 9001 system that was in place since May 1995. This new quality management system assures that our products are designed, manufactured and distributed with the full commitment of the organization. Our registrar for Quality Management System certification has remained the British Standards Institute. NALGENE® Brand Products have long been recognized for their quality, reliability and consistency. Our ISO 13485 certification is further proof of our commitment to manufacturing quality products for our customers.

ISO 13485:2003
FM 31464

The NALGENE® products in this catalog are manufactured under a Quality Management System that is ISO 13485: 2003 compliant. Items in this catalog fabricated by manufacturers that are not ISO certified are indicated with an italicized typeface in the Index by Section.

GMP Registered.

Your Added Assurance
In March 1998, our Rochester, New York location was registered as a GMP (Good Manufacturing Practices) facility for Class I devices (design exempt) with the Food and Drug Administration. Selected NALGENE® products comply with 21 CFR — Parts 820 Quality System Regulation. Adhering to GMP regulations for selected products is further proof of our commitment to bring you consistent NALGENE® quality. To make sure we maintain our standards, we're audited by an independent third party twice a year.

Warranty

Thermal Fisher Scientific provides the scientific community with professional-quality laboratory products. If you are not satisfied with a NALGENE product, write to Thermal Fisher Scientific Customer Service department, Nalgene and Nunc Brand Products 75 Panorama Creek Drive, Rochester, New York 14625-2385, USA.
In North America telephone 1-800-NALGE-CS (625-4327). Or visit our website: www.NALGENElabware.com.

In most cases, we will repair or replace the product at no charge. Certain NALGENE products which are subject to wear or which have a limited life are covered by a specific limited warranty. That warranty is stated separately and generally accompanies the product.

You will get maximum utility from NALGENE labware and will avoid misapplications if you take a few moments to read the technical information in this catalog. The catalog description of the product, as well as the instructions enclosed with the product, will also assist you.

Product Index

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NALGENE®

nunc™

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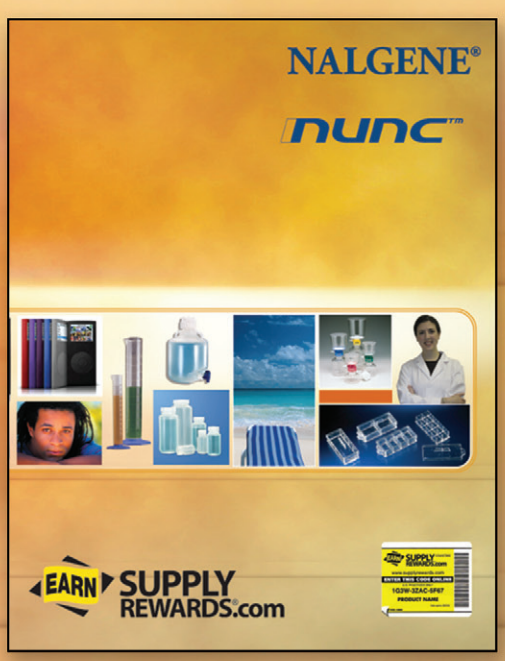
Enroll in SUPPLY REWARDS today then purchase select labware from NALGENE or NUNC. Earn valuable points that you redeem for over 2000 brand name rewards -- for business or personal use. Put a new computer, radio or coffee machine in your lab!

Visit www.nalgenunc.com for full details on how to enroll and earn rewards!



EARN SUPPLY REWARDS®.com

Lit. Code N20152

Bags

342950 B³ Media Bags™, Sterile, Multi-layer film with EVA tubing

Single-use, flexible containers for sterile fluid containment. Lightweight and sterile, virtually eliminating the cleaning, storage and sterilization costs associated with reusable containers. Ideal for storing and processing tissue culture media, harvest collection, buffer solutions and other sterile fluids. NALGENE® B³ Media Bags are sterile to 10^{-6} SAL, non-pyrogenic and non-cytotoxic. Built-in handle allows for easy transport from benchtop to dispensing hoods. Two EVA tubing ports with 3/8-in. PP hose barbs allow for easy connections with other tubing for liquid transfer. Each bag comes with a septum port for aseptic introduction or extraction of fluids. Packaged in double-lined cartons for clean room use. Individually bagged. **Sterile**

Cat. No.	Nom. Cap., L	Nom. Cap., Gal.	No. per Case
34-2950-0500	0.5	0.13	10
34-2950-0010	5	1.32	10
34-2950-0020	10	2.64	10
34-2950-0050	20	5.28	10

B³ Media Bags are not considered a medical device according to the U.S. FDA

332900 Wide-Mouth (63-mm) Packaging Bags, ULLDPE† / Nylon film with White PP Closure

These flexible wide-mouth bags are the next generation of packaging containers. Their compact, durable, lightweight design makes them an ideal container for storage or shipment of solids and liquids. Wide (63mm) mouth makes bags easy to fill and pour. Leakproof NALGENE White PP closure securely seals onto HDPE fitment threads. Bag material is strong, impact-resistant, and complies with FDA food-grade regulations for food and beverage use. Bag material also complies with USP Class VI and Non-cytotoxic standards. Bottom design lets bag stand upright when filled. Transparent with excellent contact clarity. For carrying ease, the 3-L bag has a reinforced handle. Withstands freezing and boiling temperatures.

Non-Sterile

Cat. No.	Nom. Cap., L	Nom. Cap., gal.	No. per Case
33-2900-0500	0.5	0.13	24
33-2900-1000	1	0.26	24
33-2900-1500	1.5	0.39	24
33-2900-3000	3	0.79	24

†Ultra Linear Low Density Polyethylene

342900 Sterile Wide-Mouth (63-mm) Packaging Bags, ULLDPE† / Nylon film with White PP Closure

These flexible wide-mouth bags are the next generation of packaging containers. Their compact, durable, lightweight design makes them an ideal container for storage or shipment of solids and liquids. Wide (63mm) mouth makes bags easy to fill and pour. Leakproof NALGENE White PP closure securely seals onto HDPE fitment threads. Bag material is strong, impact-resistant, and complies with FDA food-grade regulations for food and beverage use. Bag material also complies with USP Class VI and Non-cytotoxic standards. Bottom design lets bag stand upright when filled. Transparent with excellent contact clarity. For carrying ease, the 3-L bag has a reinforced handle. Withstands freezing and boiling temperatures. Gamma Irradiated to 10^{-6} SAL **Sterile**

Sterile

Cat. No.	Nom. Cap., L	Nom. Cap., gal.	No. per Case
34-2900-0500	0.5	0.13	24
34-2900-1000	1	0.26	24
34-2900-1500	1.5	0.39	24
34-2900-3000	3	0.79	24

†Ultra Linear Low Density Polyethylene

6255 Sample Bags, low-density polyethylene

Collect, store, seal and protect items conveniently and easily. Strong, waterproof LDPE walls are 4 mils thick. Heavy-duty, double track "zipper" locks securely, keeps dust out, keeps dry things dry and moist things moist. Ideal for small lab items, botanical samples, other specimens. NOTE: Not recommended for storing liquids. **Transparent**

Cat. No.6255	-0406	-0508	-0613	-0913	-0918
Nom. W x L, mm	102 x 152	127 x 203	152 x 330	229 x 330	229 x 457
Nom. W x L, in.	4 x 6	5 x 8	6 x 13	9 x 13	9 x 18
No. per Pkg	50	50	50	50	50
No. per Case	500	500	250	250	250

Beakers

A

1201 Griffin Low-Form Beakers, polypropylene

For general laboratory use. Superior chemical resistance. All size beakers have easy-to-read silk-screened graduations, plus catalog number, size code, resin code, maximum use temperature and "no flame" symbol. With ribs for easy stacking. Not for use on a hot plate. Meets ISO/DIN 7056 International Standards for Laboratory Plasticware Beakers. **Autoclavable/Graduated**

Cat. No.1201	-0030	-0050	-0100	-0150	-0250	-0400	-0600	-1000	-2000	-4000
Cap., ml	30	50	100	150	250	400	600	1000	2000	4000
No. per Pkg	12	12	12	12	6	6	4	3	1	1
No. per Case	48	48	48	48	36	36	24	12	6	4

A

1203 Griffin Low-Form Beakers, polymethylpentene

Have the transparency of glass, excellent chemical resistance, and remarkable heat tolerance – can be used continuously at 150°C with intermittent service to 175°C. All size beakers have easy-to-read silkscreened graduations, catalog number, size code, resin code, maximum use temperature and no flame symbol. Not for use on a hot plate. Meet the ISO/DIN 7056 International Standards for Laboratory Plasticware Beakers. **Autoclavable/Transparent/Graduated**

Cat. No.1203	-0030	-0050	-0100	-0150	-0250	-0400	-0600	-1000	-2000	-4000
Cap., ml	30	50	100	150	250	400	600	1000	2000	4000
No. per Pkg	12	12	12	12	6	6	4	3	1	1
No. per Case	36	36	36	36	24	24	12	12	4	4

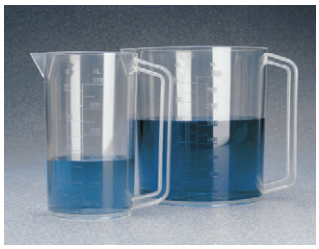
1220 Graduated Beakers with Handle, high-density polyethylene

Molded in nominal graduations in ounces and milliliters. Rectangular handle for easy carrying and pouring. Extra-heavy wall. Excellent chemical resistance. Not for use on a hot plate. **Graduated**

Cat. No.1220	-1250	-2500
Cap., ml	1000	3000
Cap., oz.	32	96
No. per Pkg	1	1
No. per Case	6	6

1223 Graduated Beakers with Handle, polymethylpentene

Molded-in nominal graduations in ounces and milliliters. Rectangular handle for easy carrying and pouring. Extra-heavy wall. Window-clear PMP. Large rectangular handle. Beakers withstand continuous use at 150°C with intermittent service to 175°C, and are transparent to microwaves. Not for use on a hot plate. **Autoclavable/Transparent/Graduated**



Cat. No.1223	-1000	-3000
Cap., ml	1000	3000
Cap., oz.	32	96
No. per Pkg	1	1
No. per Case	6	6

DS1511 Beakers with Handle, Teflon* PFA

Rigid and translucent to allow you to see liquid levels. Feature extraordinary chemical resistance and can be used repeatedly for high-purity applications. Use them with strong oxidizing agents, acids, hydrocarbons and ketones. The molded-in handle provides easy, safe handling and pouring. Material is "non-stick" so beakers are easy to clean and resistant to contamination. Not for use on hotplate.
PFA/Autoclavable

Cat. No.DS1511	-1000	-3000
Cap., ml	1000	3000
No. per Case	1	1

*Or equivalent. Teflon is a registered trademark of DuPont.

1501 Griffin Low-Form Beakers, Halar* ECTFE

The economical substitute to Teflon** PFA and FEP beakers. Excellent chemical resistance. Beakers are translucent and graduated. Not for use on a hot plate. **Halar ECTFE/Autoclavable/Graduated**

Cat. No.1501	-2000	-4000
Cap., ml (nom.)	2000	4000
No. per Pkg	1	1
No. per Case	2	2

*Halar is a registered trademark of Solvey Solexis

**Or equivalent. Teflon is a registered trademark of DuPont.

1510 Griffin Low-Form Beakers, Teflon* PFA

Superior for tough lab use. Widest temperature range: -270°C to +250°C. Not for use on a hot plate.
PFA/Autoclavable

Cat. No.1510	-0030	-0050	-0100	-0150	-0250	-0400	-0600	-1000
Cap., ml (nom.)	30	50	100	150	250	400	600	1000
No. per Pkg	1	1	1	1	1	1	1	1
No. per Case	6	6	6	6	6	4	4	4

*Or equivalent. Teflon is a registered trademark of DuPont.

Teflon PFA

A

DS1560 Evaporating Dish, Teflon* PFA

For use with high-purity samples. Ideal for drying applications in microwave and conventional ovens up to 250°C (higher temperature resistance than Teflon* TFE dishes). Unlike sintered dishes, this molded PFA dish is not subject to warping or embrittlement. Replaces expensive platinum crucibles.

PFA/Autoclavable

Cat. No.DS1560	-0150
Cap., ml	150
O.D., mm	100
O.D., in.	3-15/16
Ht., mm	42
Ht., in.	1-11/16
No. per Case	2

*Or equivalent. Teflon is a registered trademark of DuPont.

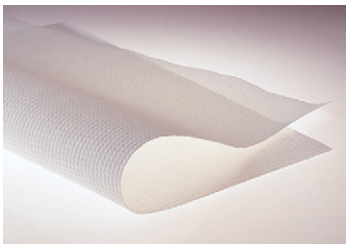
Bench Protectors

6283 Clean Sheets™ Bench, Shelf and Drawer Liner, white cross-linked polyethylene foam

1/8-inch (3-mm) thick material. Comes in 50-foot (15-m) rolls in three widths; fits standard bench tops (30-in.), drawers (18-in.) and shelves (12-in.). Use it to line sinks, drawers, benches, shelves – anywhere protection is needed against chemicals, vibration, heat, dirt, breakage. Can be cut to any size and stapled, tacked or taped.

Cat. No.6283	-1250	-1850	-3050
Width, mm	305	457	762
Width, in.	12	18	30
No. per Pkg	1	1	1
No. per Case	2	2	2

62060 Standard VERSI-DRY® Lab Soakers, paper with polyethylene backers



Absorbs 750ml/sq. meter. With a skid-resistant, waterproof, chemical-resistant polyethylene backing that makes spill containment easy. Thousands of Thirsty Cells™ quickly absorb spills and cushion breakable labware. Use as a tray, drawer or shelf liner or to wipe up spills.

Cat. No.	Description	Dimensions	No. per Case
62050-00	Dispenser Roll	20-in. x 300-ft.	1
62060-00	Roll	20-in. x 300-ft.	2
62065-00	Roll	20-in x 150-ft.	2
62070-00	Dispenser Roll	20-in. x 100-ft.	4
62080-00	Mat	18-in. x 20-in.	350

*Highest concentration tested

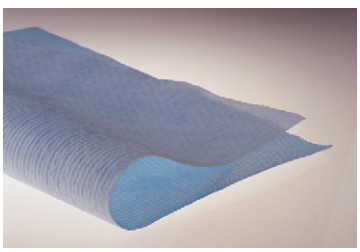
Where can you use VERSI-DRY brand Lab Soakers?

- Bench top protector
- Shelf and cabinet liner
- Tray liner
- Radioactive applications
- Hood liner
- Floor soaker/mat
- Wiping up spills
- Shipping liner for hazardous materials
- Clinical applications
- Surgical applications
- LAR units-cage liners, animal surgeries
- Wherever you need to absorb and contain spills!

Chemical Resistance - Independent lab testing has shown that VERSI-DRY resists the following chemical spills:

- Acetone
- Ammonium Hydroxide, 30%*
- Chlorine Bleach
- Chloroform
- Ethanolamine
- Hydrofluoric Acid, 10%*
- Hydrochloric Acid, 10%*
- Methylene Chloride
- Methyl Ethyl Ketone (MEK)
- Methyl Iso Butyl Ketone (MIB)
- Mineral Spirits
- Nitric Acid, 10%*
- Phosphoric Acid, 10%*
- Potassium Hydroxide, 30%*
- Sodium Hydrdoxide, 10N*
- Sulfuric Acid, 10%*
- Toluene
- Xylene

74018 Super VERSI-DRY® Lab Soakers, paper with polyethylene backers



Absorbs 1,050ml/sq. meter. With a skid-resistant, waterproof, chemical-resistant polyethylene backing that makes spill containment easy. Thousands of Thirsty Cells™ quickly absorb spills and cushion breakable labware. Sized for benchtop, floor, and fume hood. Use as a tray, drawer or shelf liner or to wipe up spills. Includes durable cloth-like top layer that won't fall apart when wet – can be used as a floor soaker.

Cat. No.	Description	Dimensions	No. per Case
74018-00	Mat	18-in. x 20-in.	350
74000-00	Roll	20-in. x 250-ft.	1
74040-00	Mat	18-in x 40-in.	175
74050-00	Roll	20-in. x 100-ft.	4
74043-00	Table	20-in. x 43-in.	150
74200-00	Floor Mat	40-in. x 200-ft.	1
74218-00	Fume Hood Mat	18-in. x 20-in.	100
74240-00	Floor Mat	18-in. x 40-in.	50

Biohazard Safety

6378 Safety Waste Funnels, High Density Polyethylene funnels and covers, polypropylene closure and funnel adaptor, PTFE vent membrane

Features the Easy Snap Safety Latch to minimize spillage if accidentally tipped over and a larger diameter funnel for easy pouring. Vent system helps reduce fumes and splashing. Removable neck screen traps large particles, like stir bars. Available in 10-in. diameter funnel with 83B closure and 5-1/2 in. funnel with 38-430 closure. NALGENE containers are recommended. For solvent, chemical and biological waste.

Cat. No.6378	-0004	-0010
NALGENE Closure size	38-430	83B
Funnel Size, Top I.D., in.	5 1/2	10
Funnel Size, Top I.D., mm	140	254
Length of Stem, mm	56	56
No. per Case	4	2

6379 Safety Waste Systems, Polpypropylene safety waste funnel and high density polyethylene or fluorinated high-density polyethylene waste container, polypropylene closure and funnel adapter, polypropylene and PTFE vent plug

For temporary storage of solvent, chemical, and biological wastes. System consists of a chemical- and break-resistant 1 1/8 gal. (4L) HDPE or 2 5/8 gal. (10L) fluorinated HDPE container; and removable funnel with lid, closure/funnel adapter, and screen insert. Large-diameter funnel includes cover with Easy-Snap safety latch to minimize accidental spills and volatile emissions. Funnel easily unscrews from polypropylene closure/funnel adapter for cleaning and quicker access. Closure/adapter includes vent with polypropylene/PTFE vent plug that releases pressure during pouring, and reduces emissions during use; closure/adapter can also connect to external syringe filter. Removable polypropylene screen insert/filter fits at bottom of funnel to trap large particles.

Cat. No.6379	-0004	-0010
Cap., L	4	10
NALGENE Closure size	38-430	83B
Funnel size, top I.D., in.	5 1/2	10
Funnel size, top I.D., mm	140	254
Length of Stem, mm	56	56
No. per Case	1	1

WARNING! Do not use with radioisotopes. Use NALGENE beta-radiation shields when working with beta-radioisotopes.

6377 Secondary Containers, low-density polyethylene

Recommended for use as secondary containment of bottles and Safety Waste Systems during transport, use or storage.

Cat. No.6377	-0002	-0004
Cap., L	3.9	5.5
Dim., O.D., in.	6-1/2	7-1/4
Dim., O.D., mm	170	180
Dim., Ht., in.	9	9-3/4
Dim., Ht., mm	230	250
No. per Case	1	1

6370 Biohazardous Waste Containers, polypropylene

Ideal autoclavable plastic waste containers for secondary containment of biohazardous waste materials. Allow convenient one-step sterilization; no need to remove autoclavable bag. Port opening in cover allows convenient one-handed disposal of materials; limits exposure to infectious waste. Hold standard size autoclavable bags. Will not rust, dent or puncture. Red universal biohazard symbol is in English and Spanish. Comply with U.S. OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. Leakproof side and bottom construction. **Autoclavable/Biohazard**

Cat. No.6370	-0004	-0005	-0015
Cap., L	5.5	19	57
Cap., gal.	1.5	5	15
O.D. x H, cm	21 X 27	28 x 38	33 x 69
O.D. x H, in	8-1/4 X 10-1/2	11 x 15	13 x 27
No. per Case	1	1	1

6501 Safety Bottle Carriers, low-density polyethylene; polycarbonate cap; epoxy-coated handle

Redesigned to accommodate 2.5-L (5-pt.) acid bottles and standard 4-L (1-gal.) chemical bottles. Bottles with finger loops fit easily, too. Cover locks in place with epoxy-coated handle while carrying. Clear plastic cap protects bottle closure and allows identification of color-coded closure on acid bottles. Cap twists for removal from cover. No need to remove bottle from carrier before pouring. Cat. No. 6501-4000 has a larger diameter that fits coated glass bottles.

Cat. No.6501	-2500	-4000
Accomodates Bottle Capacity	2.5 L; 5 pt.	4 L; 1 gal
No. per Pkg	1	1
No. per Case	6	6

Bottles

NALGENE bottles... you can't beat the system.

Closure is one-piece, linerless. Works with the bottle to create a **guaranteed leakproof system.**

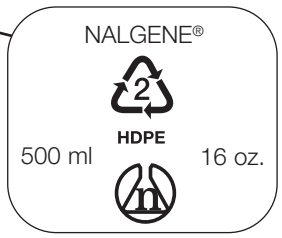
Seal Ring is molded inside the closure. Fits tightly against the beveled inner edge (chamfer) of the bottle neck. This makes the NALGENE bottle a leakproof system. No closure liner to wear, crease or cause contamination.

Shrink Ring at the neck of most NALGENE bottles is molded so the inside surface is smooth, minimizing content entrapment.

Threads on bottles and closures have continuous, straight-shouldered semi-buttress threads, not low-quality round threads.

Heavy-Duty Uniform Walls* are generally thicker and very resistant to splitting or puncturing.

Bottom has curved inner corners for easy cleaning. Stable base has permanent, molded-in resin code and volume.



*Unlike many competitve plastic bottles, most NALGENE bottles (up to four liters) are injection blow-molded. This allows more precise molding of the neck area and chamfer and more consistent wall thickness distribution. Injection blow-molded bottles feature a smoother, more stable bottom with less molded-in stress for greater product reliability. There are no pinch-offs to cause creases or splits which could harbor contaminants.

NALGENE bottles - better than glass because they're lighter weight and give better protection against leakage, breakage and contamination.

If you find a NALGENE bottle or carboy that we say is leakproof and it isn't, tell us and we'll replace it. That's the Nalgene guarantee.

NALGENE bottles and carboys are leakproof at ambient temperature and pressure when used with their NALGENE closures, except as noted in individual listings for certain materials and designs.

Testing proves the unique NALGENE closure/bottle system is leakproof.

Leak testing bottles, carboys and other containers with closures smaller than 100 mm (except jars with screw closures) - A standard test closure, with a fitting to allow pressure application, is screwed onto a randomly selected production container. The container is filled with water and inverted. Pressure of 2 psig (a greater pressure differential than the products are likely to experience in actual service) is applied for two minutes. If no water escapes, the container is leakproof.

Leak testing closures - In a complementary procedure, a fitting to allow pressure application is attached to the bottom of a standard test bottle. Water is added, a closure is screwed on and the container is inverted. Pressure is applied as described above. Closure is checked after two minutes to assure that no water has escaped.

Leak testing bottles, carboys and other containers with large closures (100 mm or 120 mm), and all jars with screw closures - A standard test closure is screwed onto a container filled with water. The container is inverted or laid on its side for 15 minutes. If no water escapes, the container passes. Closures are tested in a complementary procedure using standard test containers.

Cutting down on contamination - NALGENE bottles and carboys contain no extenders or plasticizers such as phthalates (except PVC bottles), thus eliminating a source of sample contamination.

Light Transmission in NALGENE® Amber Bottles

Many chemicals, reagents and media components are light-sensitive. Actinic light, radiation capable of producing a photochemical reaction, is often the concern. In practice, this usually means "near" ultraviolet (UV) or blue visible light. The U.S. Pharmacopoeia 661, Containers, Light Transmission, states that a container intended to provide protection from light, or offered as a "light-resistant" container must comply with requirements for maximum light transmission. USP criteria state that a container greater than 20 ml in size cannot allow more than 10% light transmission for any wavelength between 290 and 450 nanometers, measured every 20 nm. For reference, UV is usually defined as 200 nm to ~375 nm; 400 nm is blue light. We tested NALGENE bottles for light transmission using a UV/visible spectrophotometer and found that our amber and opaque bottles definitely pass the USP light transmission test.

Cat. No.	Description
2004 - all sizes	Amber, narrow-mouth bottles, HDPE
2009 - all sizes	Amber, rectangular bottles, HDPE
DS2085 - all sizes	Amber, narrow-mouth environmental sampling bottle, HDPE
2106 - all sizes	Amber, wide-mouth bottles, HDPE
DS2185 - all sizes	Amber, wide-mouth environmental sampling bottle, HDPE
2204 - all sizes	Large, amber, narrow-mouth bottles, HDPE
1620 - all sizes	Black, narrow-mouth bottles, FEP
2256 - all sizes	Amber, carboy

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

2104 Wide-Mouth Bottles, high-density polyethylene; polypropylene screw closure

Durable, general-purpose bottles with countless applications in the lab or field. Translucent, more rigid than LDPE. Wide mouth is easy to fill with dry materials or liquids. Excellent chemical resistance to most acids, bases, and alcohols. Good for freezer use to -100°C. Suitable for shipping liquids. **Leakproof**

EARN

Cat. No.2104	-0001	-0002	-0004	-0008	-0016	-0032	-0048
Cap., ml	30	60	125	250	500	1000	1500
Cap., oz.	1	2	4	8	16	32	48
Closure Size, mm	28	28	38	43	53	63	63
No. per Pkg	12	12	12	12	12	6	6
No. per Case	72	72	72	72	48	24	24

2120 Large Wide-Mouth Bottles, high-density polyethylene; white polypropylene screw closure

Excellent for dry chemicals or water sampling. Good for freezer use to -100°C.

Cat. No.2120	-0005	-0010
Cap., L	2	4
Cap., gal.	1/2	1
Closure Size, mm	100	100
No. per Pkg	1	1
No. per Case	6	6

Refer to Bottles/Information section for further information on leakproof testing.

2103 Wide-Mouth Bottles, low-density polyethylene; polypropylene screw closure

Translucent, flexible, with excellent impact resistance. Better visibility of contents than with HDPE bottles. Excellent chemical resistance to most acids, bases and alcohols. Because LDPE is also extremely low in trace metal content, it's an excellent material for trace metal analysis. Wide mouth is easy to fill. Suitable for shipping liquids. Good for freezer storage to -100°C. **Leakproof**

Cat. No.2103	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	28	28	38	43	53	63
No. per Pkg	12	12	12	12	12	6
No. per Case	72	72	72	72	48	24

2105 Wide-Mouth Bottles, polypropylene; polypropylene screw closure

For chemicals, specimens and general use where autoclaving is required. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. Excellent chemical resistance to most acids, bases and alcohols. Translucent, but offers better clarity than LDPE or HDPE.

Autoclavable/Leakproof

A

EARN

Cat. No.2105	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	28	28	38	43	53	63
No. per Pkg	12	12	12	12	12	6
No. per Case	72	72	72	72	48	24

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

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2121 Large Wide-Mouth Bottles, polypropylene; white polypropylene screw closure

Specifically designed for applications requiring autoclaving of large volumes. Not leakproof. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads.
Autoclavable

Cat. No.2121	-0005	-0010
Cap., L	2	4
Cap., gal.	1/2	1
Closure Size, mm	100	100
No. per Pkg	1	1
No. per Case	6	6

2106 Amber Wide-Mouth Bottles, amber high-density polyethylene; amber polypropylene screw closure

Help protect light-sensitive materials during shipping or storage. NALGENE amber bottles comply with U.S. Pharmacopoeia 23 requirements for maximum light transmission. Easy-to-fill wide mouth. Excellent chemical resistance to most acids, bases and alcohols. Good for freezer storage to -100°C. **Leakproof**

Cat. No.2106	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	28	28	38	43	53	63
No. per Pkg	12	12	12	12	12	6
No. per Case	72	72	72	72	48	24

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2107 Wide-Mouth Bottles, polymethylpentene; polypropylene screw closure

Transparent and autoclavable with chemical resistance similar to polypropylene. Withstands repeated autoclaving, even at 150° C. NOTE: Before autoclaving, set closure on top of the container without engaging the threads. **Autoclavable/Transparent/Leakproof**

Cat. No.2107	-0004	-0008	-0016	-0032
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	33	43	48	53
No. per Pkg	4	4	4	4
No. per Case	24	24	16	16

2002 Narrow-Mouth Bottles, high-density polyethylene; polypropylene screw closure

Popular, all-purpose Boston round bottles that are highly reliable and durable for long-term use. Ideal for storing, shipping and packaging liquids. Rigid and translucent, with excellent chemical resistance. Can be used with most corrosives. Good for freezer storage to -100°C. **Leakproof**

Cat. No.2002	-9125	-9025	-9050	-0001	-0002
Cap., ml	4	8	15	30	60
Cap., oz.	1/8	1/4	1/2	1	2
Closure Size, mm	13	20	20	20	20
No. per Pkg	12	12	12	12	12
No. per Case	72	72	72	72	72

Cat. No.2002	-0004	-0006	-0008	-0016	-9016™1	-0032™1
Cap., ml	125	175	250	500	500	1000
Cap., oz.	4	6	8	16	16	32
Closure Size, mm	24	24	24	28	38-430	38-430
No. per Pkg	12	12	12	12	12	6
No. per Case	72	72	72	48	48	24

™1Bottle neck design is protected by US Trademark Reg. No. 2857283

2003 Narrow-Mouth Bottles, low-density polyethylene; polypropylene screw closure

These translucent bottles offer greater flexibility, impact resistance and visibility of contents than HDPE bottles. Because LDPE is also extremely low in trace metal content, it's an ideal material for trace metal analysis. Available low particulate and low metals certified, see Cat. No. 382003-series. Excellent chemical resistance to most acids, bases and alcohols. Good for freezer storage to -100°C. **Leakproof**

Cat. No.2003	-9025	-9050	-0001	-0002	-0004	-0008	-0016	-9016™1	-0032™1
Cap., ml	8	15	30	60	125	250	500	500	1000
Cap., oz.	1/4	1/2	1	2	4	8	16	16	32
Closure Size, mm	20	20	20	20	24	24	28	38-430	38-430
No. per Pkg	12	12	12	12	12	12	12	12	6
No. per Case	72	72	72	72	72	72	48	48	24

2202 Large Narrow-Mouth Bottles, low-density polyethylene; polypropylene screw closure

For storing chemicals and standards, collecting and storing distilled water. The 4- and 8-liter sizes (Cat. Nos. 2202-0010 and 2202-0020) have built-in shoulder loop for attaching an identification tag. 2202-0005 comes without shoulder loop. Low in trace metals. Good for freezer storage to -100°C. Excellent chemical resistance to most acids, bases and alcohols. **Leakproof**

Cat. No.2202	-0005™1	-0010™1	-0020™1
Cap., L	2	4	8
Cap., gal.	1/2	1	2
Closure Size, mm	38-430	38-430	53B (white)
No. per Pkg	1	1	1
No. per Case	6	6	6

Bottles

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

TM1Bottle neck design is protected by US Trademark Reg. No. 2857283

2004 Amber Narrow-Mouth Bottles, amber high-density polyethylene; amber polypropylene screw closure

Reduce UV light transmission to help protect light-sensitive liquids. NALGENE amber bottles comply with U.S. Pharmacopoeia 23, 661 requirements for maximum light transmission. Useful for storage, shipping and packaging. Excellent chemical resistance to most acids, bases and alcohols. Good for freezer storage to -100°C. **Leakproof**

Cat. No.2004	-9125	-9025	-9050	-0001	-0002	-0004	-0008	-0016	-0032TM1
Cap., ml	4	8	15	30	60	125	250	500	1000
Cap., oz.	1/8	1/4	1/2	1	2	4	8	16	32
Closure Size, mm	13	20	20	20	20	24	24	28	38-430
No. per Pkg	12	12	12	12	12	12	12	12	6
No. per Case	72	72	72	72	72	72	72	48	24

A

2006 Narrow-Mouth Bottles, polypropylene; polypropylene screw closure

Ideal for lab applications requiring excellent chemical resistance and autoclaving of containers with or without contents. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. Translucent, but provides better clarity than HDPE or LDPE bottles.
Autoclavable/Leakproof

Cat. No.2006	-9125	-9025	-9050	-0001	-0002	-0004	-0008	-0016	-0032TM1
Cap., ml	4	8	15	30	60	125	250	500	1000
Cap., oz.	1/8	1/4	1/2	1	2	4	8	16	32
Closure Size, mm	13	20	20	20	20	24	24	28	38-430
No. per Pkg	12	12	12	12	12	12	12	12	6
No. per Case	72	72	72	72	72	72	72	48	24

A

2203 Large Narrow-Mouth Bottles, polypropylene; polypropylene screw closure

For storing chemicals and standards, collecting and storing distilled water. The 4-and 8-liter sizes (Cat. Nos. 2203-0010 and 2203-0020) have built-in shoulder loop for attaching an identification tag. 2203-0005 comes without shoulder loop. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. Translucent, better clarity than LDPE. **Autoclavable/Leakproof**

Cat. No.2203	-0005TM1	-0010TM1	-0020TM1
Cap., L	2	4	8
Cap., gal.	1/2	1	2
Closure Size, mm	38-430	38-430	53B (white)*
No. per Pkg	1	1	1
No. per Case	6	6	6

**with TPE gasket

2204 Large Amber Narrow-Mouth Bottles, amber polypropylene; amber polypropylene screw closure

Excellent chemical resistance to most acids, bases and alcohols. For storing chemicals and standards, collecting and storing distilled water. The 4-and 8-liter sizes (Cat. Nos. 2204-0010 and 2204-0020) have built-in shoulder loop for attaching an identification tag. 2204-0005 comes without shoulder loop. Amber PP to help protect light-sensitive materials. NALGENE amber bottles comply with U.S. Pharmacopoeia 23, 661 requirements for maximum allowable light transmission. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads.
Autoclavable/Leakproof

A

Cat. No.2204	-0005™1	-0010™1	-0020™1
Cap., L	2	4	8
Cap., gal.	1/2	1	2
Closure Size, mm	38-430	38-430	53B (white)*
No. per Pkg	1	1	1
No. per Case	6	6	6

**with TPE gasket

2205, DS2205 Narrow-Mouth Bottles, polycarbonate; polypropylene screw closure

Autoclavable, window-clear bottles with excellent impact resistance. Nalgene offers the widest selection of clear polycarbonate bottles from 500-ml to 20 liters. The 500- and 1000-ml sizes (Cat. Nos. 2205-0016 and 2205-0032) are good for smaller volume applications where you need to see your contents. The 2- and 2.5-liter sizes (Cat. Nos. 2205-0210 and 2205-0250) can be used as culture vessels for batch, suspension or non-attached roller-culturing. Contact NALGENE Technical support for details. The 4- and 8-liter sizes (Cat. Nos. 2205-0010 and 2205-0020) have built-in shoulder loop for attaching an identification tag. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. Autoclave empty. Repeated autoclaving will shorten the bottle life-span. Good for freezer use to -135°C. **Autoclavable/L900/Transparent/Leakproof**

A

Cat. No.2205	-0016™1	-0032™1		
Cap., ml	500 ml	1000 ml		
Cap., oz.	16 oz.	32 oz.		
Closure Size, mm	38-430	38-430		
No. per Pkg	4	4		
No. per Case	24	24		
Cat. No.DS2205	**-0210™1**	**-0250™1**	**-0010™1**	**-0020™1**
Cap., L	2	2.5	4	8
Cap., gal.	1/2	1/2	1	2
Closure Size, mm	38-430	38-430	38-430	53B (white)
No. per Case	1	1	1	1

DS2000 Narrow-Mouth Bottles, polyvinyl chloride; polypropylene screw closure

PVC offers excellent chemical resistance to oils (except essential oils), most acids, alcohols, aliphatic hydrocarbons and bases. They provide an excellent oxygen barrier. **Transparent/Leakproof**

Cat. No.DS2000	-0004	-0008	-0016	-0032
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	24	24	28	38
No. per Pkg	–	–	–	6
No. per Case	12	12	12	24

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

2007 Rectangular Bottles, high-density polyethylene; polypropylene screw closure

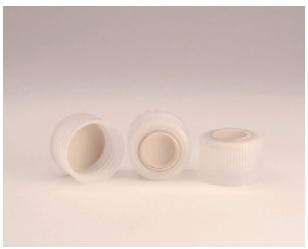
Rectangular style takes up less shelf space than Boston round. Sturdy wall construction, straight sides and wide mouth for easy filling. Excellent for sampling, shipping or storing liquids or dry materials. Excellent chemical resistance to most acids, bases and alcohols. Good for freezer storage to -100°C. **Leakproof**

Cat. No.2007	-0004	-0008	-0016	-0032	-0064
Cap., ml	125	250	500	1000	2000
Cap., oz.	4	8	16	32	64
Closure Size, mm	28	38	48	53	63
Dim. H x W x D, mm	102 x 64 x 38	114 x 76 x 48	140 x 94 x 58	180 x 125 x 71	239 x 152 x 81
Dim. H x W x D, in.	4 x 2-1/2 x 1-1/2	4-1/2 x 3 x 2	5-1/2 x 3-3/4 x 2-1/4	7 x 5 x 2-3/4	9-1/2 x 6 x 3-1/4
No. per Pkg	12	12	12	6	4
No. per Case	72	72	48	24	12

2009 Amber Rectangular Bottles, amber high-density polyethylene; amber polypropylene screw closure

These space-saving bottles help protect light-sensitive liquids or dry materials. NALGENE amber bottles comply with U.S. Pharmacopoeia 23, 661 requirements for maximum light transmission. Excellent chemical resistance to most acids, bases and alcohols. Good for freezer storage to -100°C. **Leakproof**

Cat. No.2009	-0004	-0008	-0016	-0032	-0064
Cap., ml	125	250	500	1000	2000
Cap., oz.	4	8	16	32	64
Closure Size, mm	28	38	48	53	63
Dim. H x W x D, mm	102 x 64 x 38	114 x 76 x 48	140 x 94 x 58	180 x 125 x 71	239 x 152 x 81
Dim. H x W x D, in.	4 x 2-1/2 x 1-1/2	4-1/2 x 3 x 2	5-1/2 x 3-3/4 x 2-1/4	7 x 5 x 2-3/4	9-1/2 x 6 x 3-1/4
No. per Pkg	12	12	12	6	4
No. per Case	72	72	48	24	12



A

DS2168 Autoclavable Septum Closure, polypropylene closure, thermoplastic elastomer septum

Unique closure system suitable for use with any bottle or container with a 38-430 neck, including NALGENE culture vessel (Cat. No. 2600) and culture vessel mixing system (Cat. No. 2602), media bottles, and other square bottles. Allows aseptic injection of reagent or sample withdrawal without compromising sterility or integrity of contents. Use with 18 gauge or smaller needle.* **Autoclavable**

*For research use only, not for *in vitro* diagnosis or parenterals.

Cat. No.DS2168	-0384
Size, mm	38-430
No. per Case	12

TM1Bottle neck design is protected by US Trademark Reg. No. 2857283

TM2Square Bottle with arched shoulders design is protected by US Trademark Reg. No. 2857279

2015 Square Bottles, polycarbonate; polypropylene screw closure

Excellent clarity and durability. Ideal for general purpose storage of aqueous solutions and short-term storage of media. Graduated. 2L size has molded-in handgrips. Before autoclaving, just set closure on top of the container without engaging the threads. Autoclave empty. Repeated autoclaving will shorten the life of the bottle. Good for freezer use to -135°C. **Autoclavable/Transparent/Leakproof/Graduated**

A

Cat. No.2015	-0030	-0060	-0125TM1 TM2	-0250TM1 TM2	-0500TM1 TM2	-1000TM1 TM2	-2000TM1 TM2
Cap., ml	30	60	125	250	500	1000	2000
Cap., oz.	1	2	4	8	16	32	64
Closure Size, mm	20	24	38-430	38-430	38-430	38-430	53B (white)
No. per Pkg	12	12	6	6	4	4	1
No. per Case	96	96	48	48	24	24	6

2016 Square Bottles, polypropylene; polypropylene screw closure

Repeatedly autoclavable; resistant to acids, alcohols and bases, graduated. Translucent bottles provide visible liquid level. Useful over a temperature range of -40°C to 121°C. NOTE: Before autoclaving, just set closure on top of the container without engaging the threads. **Autoclavable/Leakproof/Graduated**

A

Cat. No.2016	-0030	-0060	-0125TM1 TM2	-0250TM1 TM2	-0500TM1 TM2	-1000TM1 TM2
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	20	24	38-430	38-430	38-430	38-430
No. per Pkg	12	12	12	12	12	6
No. per Case	72	72	72	72	48	24

2018 Square Bottles, high-density polyethylene; polypropylene screw closure

Economical. Most chemical-resistant and break-resistant of all NALGENE square bottles. Translucent. Graduated. Can be used to -100°C. Not autoclavable. **Leakproof/Graduated**

Cat. No.2018	-0030	-0060	-0125TM1 TM2	-0250TM1 TM2	-0500TM1 TM2	-1000TM1 TM2
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	20	24	38-430	38-430	38-430	38-430
No. per Pkg	12	12	12	12	12	6
No. per Case	72	72	72	72	48	24

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

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2110 Wide-Mouth Square Bottles, polypropylene; polypropylene screw closure

Square shape saves space; wide mouth is easy to fill. PP is resistant to acids, alcohols and bases. Contact-clear bottle provides visible liquid level. Has wide mouth for easy cleaning, sample filling and retrieval. Square shape offers large labeling surface. Before autoclaving, just set cap or closure on top of the container without engaging the threads. **Autoclavable/Leakproof**

Cat. No.2110	-0002	-0006	-0008	-0016	-0032
Cap., ml	60	175	250	500	1000
Cap., oz.	2	6	8	16	32
Closure Size, mm	28	38	43	53	63
Dim., mm	83 x 37 x 37	106 x 52 x 52	116 x 62 x 62	146 x 75 x 75	181 x 95 x 95
Dim., in.	3 x 1-1/2 x 1-1/2	4 x 2 x 2	4-1/2 x 2-1/2 x 2-1/2	5-1/2 x 3 x 3	7 x 3-1/2 x 3-1/2
No. per Pkg	12	12	12	12	6
No. per Case	72	72	72	48	24

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2122 Large Wide-Mouth Square Bottle, polypropylene; white polypropylene screw closure

Autoclavable, space-saving bottle features convenient, molded-in handgrips. Excellent for storing and sterilizing contaminated slides and other small lab items. Not leakproof. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. **Autoclavable**

Cat. No.2122	-0010
Cap., L	4
Cap., gal.	1
Dim., mm	279 x 140 x 140
Dim., in.	11 x 5-1/2 x 5-1/2
Closure Size, mm	100
No. per Pkg	1
No. per Case	6

2114 Wide-Mouth Square Bottles, high-density polyethylene; polypropylene screw closure

Square shape saves space; wide mouth is easy to fill. Excellent chemical resistance to most acids, bases and alcohols. Good for freezer storage to -100°C. Leakproof. **Leakproof**

Cat. No.2114	-0002	-0006	-0008	-0016	-0032
Cap., ml	60	175	250	500	1000
Cap., oz.	2	6	8	16	32
Closure Size, mm	28	38	43	53	63
Dim., mm	83 x 37 x 37	106 x 52 x 52	116 x 62 x 62	146 x 75 x 75	181 x 95 x 95
Dim., in.	3-1/2 x 1-1/2 x 1-1/2	4 x 2 x 2	4-1/2 x 2-1/2 x 2-1/2	5-1/2 x 3 x 3	7 x 3-3/4 x 3-3/4
No. per Pkg	12	12	12	12	6
No. per Case	72	72	72	48	24

2123 Large Wide-Mouth Square Bottle, high-density polyethylene; white polypropylene screw closure

Space-saving bottle features molded-in handgrips for greater convenience and safety when pouring. Excellent for collecting, storing and transporting dry chemicals, and environmental samples. Square shape saves space and wide mouth allows easy access to contents. Good for freezer use to -100°C.

Cat. No.2123	-0010
Cap., L	4
Cap., gal.	1
Dim., mm	279 x 140 x 140
Dim., in.	11 x 5-1/2 x 5-1/2
Closure Size, mm	100
No. per Pkg	1
No. per Case	6

IMPORTANT! NALGENE® dilution bottles comply with dilution methodology described in Standard Methods for the Examination of Water and Wastewater (18th Ed.) and Standard Methods for the Examination of Dairy Products (15th Ed.), as well as other professional standards. For further details, contact NALGENE Technical Support. International customers please contact NALGENE International Department.

2500 Dilution Bottles, polysulfone, polypropylene screw closure

A

Transparent, excellent resistance to weak acids, bases and all aqueous solutions. With useful temperature range of -100°C to +165°C. Autoclavable, but when used with Tween will reduce the life of the bottle. Graduated at 90 and 99 ml. Accurate to ± 1 ml. **Autoclavable/Transparent/Leakproof**

Cat. No.2500	-0280	-0380
Cap. to neck, ml	200	205
Cap. to neck, oz.	6	6
Closure Size, mm	28	38
No. per Pkg	12	12
No. per Case	48	48

2505 Dilution Bottles, polypropylene copolymer, polypropylene screw closure

A

Contact-clear, excellent resistance to strong acids, alcohols and bases. Useful temperature range of -40°C to +121°C. Withstand repeated washing and autoclaving with Tween. Graduated at 90 and 99 ml. Accurate to ± 4 ml. **Autoclavable/Leakproof**

Cat. No.2505	-0280	-0380
Cap. to neck, ml	200	205
Cap. to neck, oz.	6	6
Closure Size, mm	28	38
No. per Pkg	12	12
No. per Case	48	48

Bottles

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

™1Bottle neck design is protected by US Trademark Reg. No. 2857283

2125 Heavy-Duty Bottles, high-density polyethylene; white polypropylene screw closure

Unique, heavy-duty construction. Large, thick-walled bottles with wide mouths, specially designed for use as extra-rugged storage or shipping containers for liquids or dry chemicals. Heavy-duty closure like those on NALGENE carboys. **Leakproof**

Cat. No.2125	-1000™1	-2000™1	-4000™1
Cap., ml	1,000	2,000	4,000
Cap., oz.	32	64	128
Closure Size, mm	53B	53B	83B
No. per Pkg	6	2	1
No. per Case	24	12	6

A

2126, DS2126 Heavy Duty Vacuum Bottle, polypropylene; white polypropylene closure; TPE gasket

Our most durable NALGENE bottle. Large, thick-walled bottle with wide mouth for extra-rugged service. Polypropylene bottle and white polypropylene closure with TPE gasket provide leakproof service. Withstand application of full vacuum for 24 hours at 20°C. **Autoclavable/New**

Cat. No.2126	-1000™1	-2000™1	-4000™1	-5000™1
Nom. Cap., ml	1,000	2,000	4,000	5,000
Nom. Cap., oz.	32	64	128	160
Closure Size, mm	53B	53B	83B	83B
No. per Pkg	6	2	1	1
No. per Case	24	12	6	4

Cat. No.DS2126	-0250™1
Nom. Cap., ml	250
Nom. Cap., oz.	8
Closure Size, mm	53B
No. per Case	6

WARNING! Do not use NALGENE® bottles, carboys or other containers under pressure or vacuum except as specifically noted (Cat. Nos. 2126, DS2126, 2226). The application of pressure or vacuum to products not designed for such use may result in product failure, damage to property, or personal injury.

PassPort™ IP2 Bottles

As of October 1, 1994, production of shipping containers labeled with U.S. DOT (Department of Transportation) information ended, per the U.S. DOT/HM-181 transition timeline. A new set of international hazardous material shipping standards incorporating the United Nations Performance-Oriented Packaging regulations is now in effect. NALGENE PassPort IP2 bottles can be used in compliance with the new regulations and are recommended for customers who are designing, assembling and certifying their own combination packaging. These high-density polyethylene (HDPE) bottles have been evaluated at 15 psi (103 kPa) and can be incorporated into existing or customer-designed combination packaging systems, eliminating the time and expense of certifying the bottles at a third-party lab. We will continue to offer bottles previously marked "DOT-2E", but they will now be marked "IP2".

2099 Narrow-Mouth PassPort IP2 Bottles, high-density polyethylene; polypropylene screw closure

Excellent for small-scale inter-lab shipping of hazardous samples and chemicals such as corrosives and cleaning compounds. Recommended for customers who are designing, assembling and certifying their own combination packaging. Heavy-duty walls. Designed to resist splitting and puncturing from shipping shocks; proven effective by industrial users. Molded into the bottom: IP2 marking, material, volume, registration notch and NALGENE® brand name. Evaluated at 15 psi (103 kPa) per 49 CFR 173.27 (c) (2), ICAO Technical Instructions Part 4; 1.1.6, and IATA Dangerous Goods Regulations Section 5.0.2.9. **Leakproof**

Cat. No.2099	-0001	-0002	-0004	-0008	-0016	-0032™1	-0010™1
Cap., ml	30	60	125	250	500	1000	4L
Cap., oz.	1	2	4	8	16	32	1 gal
No. per Pkg	12	12	12	12	12	6	1
No. per Case	72	72	72	72	48	24	6

2199 Wide-Mouth PassPort IP2 Bottles, high-density polyethylene; polypropylene screw closure

Safe, durable, cost-efficient line of wide-mouth bottles for packaging and transporting hazardous materials. Recommended for customers who are designing, assembling and certifying their own combination packaging. Split- and puncture-resistant. Wide mouth allows for easy filling of dry materials or liquids. Heavy duty walls. Molded into bottom: IP2 marking, material, volume, registration notch and the NALGENE® brand name. Evaluated at 15 psi (103 kPa) per 49 CFR 173.27 (c) (2), ICAO Technical Instructions Part 4; 1.1.6, and IATA Dangerous Goods Regulations Section 5.0.2.9. **Leakproof**

Cat. No.2199	-0004	-0008	-0016	-0032
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
No. per Pkg	12	12	12	6
No. per Case	72	72	48	24

Bottles

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

WARNING! Do not use NALGENE® bottles, carboys or other containers under pressure or vacuum except as specifically noted (Cat. Nos. 2126, DS2126, 2226). The application of pressure or vacuum to products not designed for such use may result in product failure, damage to property, or personal injury.

TM1Bottle neck design is protected by US Trademark Reg. No. 2857283

382099 Low Particulate PassPort IP2 Bottles, high-density polyethylene; polypropylene screw closures

Narrow-mouth bottles with an average of less than 30 particles per ml at 0.3µm and greater. Excellent for storing high-purity chemicals. Product includes a certificate of quality that assures the product has been tested and accepted in accordance with NALGENE specifications. NALGENE Low Particulate IP2 Bottles can be used in compliance with the regulations for customers who are designing, assembling and certifying their own combination packaging. Non-sterile. **Leakproof**

Cat. No.38-2099	-0125	-0250	-0500	-1000TM1
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	24	24	28	38-430
No. per Case	72	72	48	24

NEW

382003 Low Particulate/Low Metals Bottles, low-density polyethylene, polypropylene screw closure

Narrow-mouth bottles with a particle level of less than 20 particles per ml at 0.3µm and greater. Metals certified to (µg/L) ppb levels <0.20 Hg, <0.5 Be, <1.0 As, Cd, Pb, <2.0 Sb, Se, <5.0 Ag, Co, Cr, Cu, Mn, Th, V, <10 Ba, Ni, Zn, <50 Mg, <75 Al, <100 Ca, Fe, K, Na. Each bottle is double bagged under Class 10 laminar flow hoods inside a Class 100 clean room. Excellent for ICP-MS reagent and standard storage. Product includes a certificate of quality that assures the product has been tested and accepted in accordance with specifications. Non-sterile. **Leakproof/New**

Cat. No.38-2003	-0004	-0008	-0016	-0032TM1
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	24	24	28	38-430
No. per Pkg	12	12	12	6
No. per Case	72	72	48	24

381600 Low Particulate/Low Metals Bottles, Teflon* FEP; Tefzel* ETFE screw closure

Narrow-mouth bottles with a particle level of less than 20 particles per ml at 0.3µm and greater. Metals certified to (µg/L) ppb levels <0.20 Hg, <0.5 Be, <1.0 As, Cd, Pb, <2.0 Sb, Se, <5.0 Ag, Co, Cr, Cu, Mn, Th, V, <10 Ba, Ni, Zn, <50 Mg, <75 Al, <100 Ca, Fe, K, Na. Each bottle is double bagged under Class 10 laminar flow hoods inside a Class 100 clean room. Excellent for storing high-purity chemicals. Product includes a certificate of quality that assures the product has been tested and accepted in accordance with specifications. Non-sterile **Autoclavable/Leakproof/Teflon FEP/New**

Cat. No.38-1600	-0004	-0008	-0016	-0032™1
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	24	24	28	38
No. per Pkg	1	1	1	1
No. per Case	6	4	4	4

Custom Cleaned and Certified Containers

Most NALGENE bottles and carboys can be custom cleaned and certified to customer specififcations. For information on custom cleaning and certification, contact NALGENE Technical Services at 1-800-625-4327.

™2Square Bottle with arched shoulders design is protected by US Trademark Reg. No. 2857279

2019 Sterile Square Media Bottles, PETG (polyethylene terephthalate copolyester); white high-density polyethylene screw closure

Inexpensive alternatives to glass media bottles. These heavy-walled durable, square PETG bottles are graduated to contain. Reduced permeability to CO_2/O_2. Bottles and closures are radiation-sterilized and non-pyrogenic to eliminate costly washing, depyrogenation and autoclaving steps. Heat-shrink band around closure and neck provides tamper-evident seal. Packed in shrink-wrapped trays. Sold by the case only. 2-L size (Cat. No. 2019-2000) has molded-in handgrips and a 53-mm (53B) white closure. Bottles are sterile to 10^{-6} SAL, non-pyrogenic, non-cytotoxic and comply with USP Class VI guidelines.
Sterile/Transparent/Leakproof/Graduated

Cat. No.2019	-0030™1 ™2	-0060™1 ™2	-0125™1 ™2	-0250™1 ™2	-0500™1 ™2	-1000™1 ™2	-2000™1 ™2
Cap., ml	30	60	125	250	500	1000	2000
Cap., oz.	1	2	4	8	16	32	64
Closure Size, mm	20	24	38-430	38-430	38-430	38-430	53B
No. Trays per Case	4	4	2	2	2	2	2
No. per Pkg	24	24	24	24	12	12	6
No. per Case	96	96	48	48	24	24	12

NEW

312160 Heat-Shrink Bands for NALGENE PETG Media Bottles, polyvinyl choride

The heat-shrink bands found on NALGENE® Sterile PETG Square Media Bottles (2019-XXXX) are now available separately. These bands provide a tamper-resistant seal to ensure the integrity of the bottle contents. Simply apply the recommended application torque for NALGENE closures, and slide the heat-shrink band over the closure and bottle neck; heat the band to shrink and secure contents. Bands are gamma stable and include a perforated "tear strip" feature for easy removal. They are available in 4 sizes to mate with NALGENE PETG Square Media Bottles. Packed 1,000 per case (two zipper bags of 500 each). **New**

Cat. No.312160	-0200	-0240	-0384	-0530
Fits NALGENE PETG Square Media Bottle	30ml PETG Bottle with 20-415 HDPE Closure	60ml PETG Bottle with 24-415 HDPE Closure	125ml-1000ml PETG Bottles with 38-430 HDPE Closure	2000ml PETG Bottle with 53B HDPE Closure
Bottle/Closure Cat. No.	2019-0030, 3x202x-0030	2019-0060, 3x202x-0060	2019-0125, 2019-0250, 2019-0500, 2019-1000,	2019-2000, 3x202x-2000
Torque Wrench Fittings	2195-1020	2195-1024	2195-1438	2195-1153
Application Torque	10-14 in.-lb	12-17 in.-lb	27-33 in.-lb	38-53 in.-lb

STERILE

2035 Sterile Diagnostic Bottles, polyethylene terephthalate copolymer with lined white high-density polyethylene closure

Ideal for sterile sampling, storage and shipment of reagents and buffer solutions. Bottles are sterile to 10^{-6} SAL, non-pyrogenic, non-cytotoxic and comply with USP VI guidelines. **Sterile**

Cat. No.2035	-0005	-0010	-0020
Cap., ml	5	10	20
Closure Size, mm	20-415	20-415	20-415
No. per Pkg	20	20	20
No. per Case	100	100	100

NEW STERILE

342002, 342089 Narrow-Mouth Bottles, high-density polyethylene, white polypropylene closure

Sterile bottles have excellent chemical resistance. Manufactured and packaged in a controlled environment to minimize biological and particulate contamination. Packaged in shrink-wrap tray modules that are double-bagged. **New/Sterile/Leakproof**

Cat. No.342002	-9025	-9050
Cap., ml	8	15
Cap., oz	1/4	1/2
Closure Size, mm	20-415	20-415
No. in Module	98	112
No. per Case	980	896

Cat. No.342089	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	30	60	125	250	500	1000
Cap., oz	1	2	4	8	16	32
Closure Size, mm	20-415	20-415	24-415	24-415	28-415	38-430
No. in Module	54	45	24	30	20	12
No. per Case	864	540	240	180	120	24

3750, 3751 Sterile InVitro™ Biotainer® Bottle, high density polyethylene; silicone lined polypropylene closure

Sterile, ready-to-use HDPE bottle suitable for freezing and storing biological reagents from -100°C to 99°C. 38mm closure is silicone lined. 3.9L overflow volume. Black printed graduations in ml to 3000ml. Space saving square shape and convenient handle. Cat. No. 3750-24 comes with tamper evident shrink bands around neck and closure. Meets current USP 87, 88. Each lot tested for pyrogenicity. Sterile/Graduated. **New Design/Sterile/Graduated**

Sterile

Cat. No.3751	-24	-42
Cap., ml	4000	4000
Cap., oz.	128	128
Closure size, mm	38	38
No. per pkg	8	8
No. per Case	24	24

Cat. No.3750	-24*
Cap., ml	4000
Cap., oz.	128
Closure size, mm	38
No. per pkg	8
No. per Case	24

* with shrink-seal band

3030, 3120, 3233, 3500 Sterile InVitro™ Biotainer® Bottle, light blue polycarbonate; silicone lined polypropylene closure

Sterile, ready-to-use containers are molded in blue-tinted polycarbonate, providing safe storage from -100°C to 99°C. Closures feature a silicone liner. All sizes except for 5 ml vial have printed graduations in mL. All have space-saving square shape and ribbed hand-grips (except 125ml). Meet USP 87, 88 and are tested for pyrogenicity. See also carboy section for larger sizes. **New Design/Sterile/Transparent/Leakproof/Graduated**

Sterile

Cat. No.	Cap., ml	Cap., oz.	Closure Size, mm	No. per pkg	No. per Case
3500-05	5	1/8	20-415	100	500
3030-42	125	4	38	5	50
3120-42	1000	32	48	5	35
3233-42	2000	64	48	5	20

3005, 3025, 3110, 3230 Sterile InVitro™ Biotainer® Bottles, PETG (polyethylene terephthalate copolyester); polyethylene-liner closure

Indented, ribbed handgrips and printed graduations are featured on all these bottles except for 125ml size. Choose from Lab Pack or Bulk Pack. Supplied sterile and ready to use. Materials meet current USP VI, are non-cytotoxic and non-pyrogenic. Reduce the risk of carry-over contamination by eliminating the cost of cleaning. sterilizing and associated validations. See carboy section for larger 5L size. **New/Graduated/Transparent/USPVI/Leakproof**

Cat. No.	Cap., ml	Closure Size, mm	No. per pkg	No. per Case
3025-42	125	38	5	100
3005-42	500	38	5	70
3005-70	500	38	35	70
3110-42	1000	48	5	35
3110-35	1000	48	35	35
3230-20	2000	48	5	20
3230-42	2000	48	20	20

TM1Bottle neck design is protected by US Trademark Reg. No. 2857283

A Teflon FEP

1600 Narrow-Mouth Bottles, Teflon* FEP; Tefzel* ETFE screw closure

The most chemical-resistant, corrosion-resistant containers available. These autoclavable bottles give you clarity and outstanding resistance to virtually all chemicals and extreme temperatures. Excellent for high- and low-temperature work, trace metal analysis and many applications with organic solvents. For high-purity analysis or storage, these bottles can be rigorously cleaned in boiling nitric acid. Bottles with closure withstand temperatures from -105°C to +150°C. Packaged individually. Before autoclaving, just set cap or closure on top of the container without engaging the threads. Also available low particulate/low metals certified, Cat. No. 381600. **Autoclavable/Leakproof/Teflon FEP**

Cat. No.1600	-0001	-0002	-0004	-0008	-0016	-0032TM1	-0064TM1
Cap., ml	30	60	125	250	500	1000	2000
Cap., oz.	1	2	4	8	16	32	64
Closure Size, mm	20	20	24	24	28	38	38-430
No. per Pkg	1	1	1	1	1	1	1
No. per Case	8	8	6	4	4	4	2

*Teflon and Tefzel are registered trademarks of DuPont.

A Teflon FEP

DS1620 Narrow-Mouth Opaque Bottles, black Teflon* FEP; black Tefzel* ETFE screw closure

These bottles combine the extraordinary chemical resistance of FEP and the opacity of carbon black pigment. Zero transmission of both visible and ultraviolet light to 5000°A makes these bottles ideal for storage of virtually any light-sensitive material. Useful for pollution sampling and analysis; also help protect chemically aggressive light-sensitive liquids. Bottles with closure withstand temperatures from -105°C to +150°C. Packaged individually. Before autoclaving, just set cap or closure on top of the container without engaging the threads. **Autoclavable/Leakproof/Teflon FEP**

Cat. No.DS1620	-0016	-0032
Cap., ml	500	1000
Cap., oz.	16	32
Closure Size, mm	28	38
No. per Case	4	4

*Teflon and Tefzel are registered trademarks of DuPont.

A Teflon PFA

1630, DS1630 Narrow-Mouth Bottles, Teflon* PFA, Teflon PFA screw closure

The most temperature-resistant, chemical-resistant, corrosion-resistant containers available. Teflon PFA is inert to virtually all chemicals except molten alkali metals, fluorine at elevated temperatures and certain complex halogenated compounds at elevated temperatures and pressures. Bottles with closure withstand temperatures from -270° to 250°C. Translucent bottles allow liquid levels to be seen. Linerless, leakproof closure made of Teflon PFA for a positive seal. Packaged individually. Before autoclaving, just set cap or closure on top of the container without engaging the threads.
Autoclavable/Leakproof/PFA

Cat. No.1630	-0004TM1	-0008TM1	-0016TM1	-0032TM1
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	38-430	38-430	38-430	38-430
No. per Pkg	1	1	1	1
No. per Case	6	4	4	4

Cat. No.DS1630	-0001	-0002
Cap., ml	30	60
Cap., oz.	1	2
Closure Size, mm	20	20
No. per Case	8	8

*Teflon is a registered trademark of DuPont.

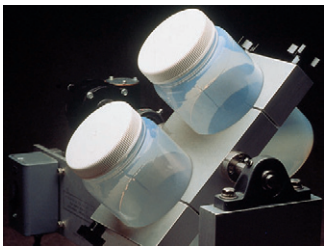
2100 Wide-Mouth Bottles, Teflon* FEP; Tefzel* ETFE screw closure

The extraordinary chemical and temperature resistance of Teflon FEP, with the convenience of a wide mouth. These virtually clear, autoclavable bottles are ideal for high- or low-temperature work, trace metal analysis and applications with organic solvents. Bottles with closure withstand temperatures from -105°C to +150°C. Packaged individually. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. **Autoclavable/Leakproof/Teflon FEP**

Cat. No.2100	-0004	-0008	-0016	-0032	-0064
Cap., ml	125	250	500	1000	2000
Cap., oz.	4	8	16	32	64
Closure Size, mm	33	43	48	53	53
No. per Pkg	1	1	1	1	1
No. per Case	6	4	4	4	2

*Teflon and Tefzel are registered trademarks of DuPont.

2101 Wide-Mouth EP Tox/TCLP Bottle, Teflon* FEP; Teflon-lined white polypropylene closure



Specially designed for EPA Method 1311: Toxicity Characteristic Leaching Procedure (TCLP), this 2.2-L bottle features the excellent chemical and temperature resistance of Teflon FEP with a wide mouth for testing large-sized samples. So durable and versatile, this clear, autoclavable bottle can be used at high or low temperatures for trace metal analysis and applications with organic solvents. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads.
Autoclavable/Leakproof/Teflon FEP

Cat. No.2101	-2200
Cap., L	2.2
Closure Size, mm	100
No. per Pkg	1
No. per Case	2

*Teflon is a registered trademark of DuPont.

2097 Fluorinated Narrow-Mouth Bottles, fluorinated high-density polyethylene; fluorinated polypropylene screw closure

Safe, durable, cost-efficient line of narrow-mouth bottles and carboys feature fluorinated surfaces, (both inside and outside) for improved barrier properties and reduced solvent absorption and permeation. Fluorination enhances long-term container performance, prevents permeation loss and yields lower extractables. Split- and puncture-resistant. Heavy-duty walls. Please see carboy section for larger sizes.
Leakproof

Cat. No.2097	-0008	-0016	-0032TM1	-0005TM1	-0010TM1
Cap., L	250ml	500ml	1	2	4
Cap., oz.	8	16	32	64	1 gal.
Closure Size, mm	24	28	38-430	38-430	38-430
No. per Pkg	12	12	6	1	1
No. per Case	72	48	24	6	6

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

2197 Fluorinated Wide-Mouth Bottles, fluorinated high density polyethylene; fluorinated polypropylene screw closure

Safe, durable, cost-efficient line of fluorinated wide-mouth bottles. Fluorinated surface provides improved barrier properties and reduces solvent absorption and permeation. Fluorination enhances long-term container performance, prevents material loss due to permeation and yields lower extractables. Wide-mouth design allows for easy filling and dispensing of solid and liquid materials. Split- and puncture-resistant. Recyclable. **Leakproof**

Cat. No.2197	-0004	-0008	-0016	-0032
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	38	43	53	63
No. per Pkg	12	12	12	6
No. per Case	72	72	48	24

2124 Fluorinated Large Wide-Mouth Bottle, fluorinated high-density polyethylene; fluorinated white polypropylene screw closure

Fluorination enhances long-term container performance, prevents material loss due to permeation and yields lower extractables. Recyclable. **Leakproof**

Cat. No.2124	-0005
Cap., L	2
Cap., gal.	1/2
Closure Size, mm	100
No. per Pkg	1
No. per Case	6

Nominal Capacity	Description	Catalog Number	Approx. Brim Cap., ml	Material	Color	Screw Closure Size, mm	Closure Cat. No.	I.D. Neck, mm/in.	Hgt. w/ Closure, mm/in.	Hgt. w/out Closure, mm/in.	O.D. Bottle, mm/in.
4 ml (1/8 oz.)	Bottle, NM	2002-9125	4.2	HDPE	Natural	13	71-2150-0130	8/5/16	41/1 5/8	39/1 1/2	16/5/8
	Bottle, NM	2004-9125	4.2	HDPE	Amber	13	71-2171-0130	8/5/16	41/1 5/8	39/1 1/2	16/5/8
	Bottle, NM	2006-9125	4.2	PP	Natural	13	71-2150-0130	8/5/16	41/1 5/8	39/1 1/2	16/5/8
	Bottle, NM	2035-0005	9.8	PETG	Clear	20	34-2158-0021	11/7/16	46/1 7/8	44/1 3/4	22/7/8
	Biotainer Bottle, Sterile	3500-05	10	PC	Lt. Blue	20-415	–	11/7/16	46/1 7/8	44/1 3/4	22/7/8
7.5 ml (1/4 oz.)	Bottle, NM	2002-9025	12	HDPE	Natural	20	71-2150-0200	14/9/16	45/1 3/4	43/1 11/16	25/1
	Bottle, NM, Shrink Wrap	342002-9025	12	HDPE	Natural	20	71-2150-0200	14/9/16	45/1 3/4	43/1 11/16	25/1
	Bottle, NM	2003-9025	12	LDPE	Natural	20	71-2150-0200	14/9/16	45/1 3/4	43/1 11/16	25/1
	Bottle, NM	2004-9025	12	HDPE	Amber	20	71-2171-0200	14/9/16	45/1 3/4	43/1 11/16	25/1
	Bottle, NM	2006-9025	12	PP	Natural	20	71-2150-0200	14/9/16	45/1 3/4	43/1 11/16	25/1
	Bottle, NM	2035-0010	15	PETG	Clear	20	34-2158-0021	11/7/16	56/2 1/4	54/2 1/8	24/15/16
15 ml (1/2 oz.)	Bottle, NM	1600-0001	35	FEP	Clear	20	71-2174-0200	14/9/16	75/2 15/16	72/2 13/16	32/1 1/4
	Bottle, NM	DS1630-0001	35	PFA	Natural	20	71-2172-0020	14/9/16	75/2 15/16	72/2 13/16	32/1 1/49
	Bottle, NM	2002-0001	34	HDPE	Natural	20	71-2150-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 5/16
	Bottle, NM	2002-9050	18	HDPE	Natural	20	71-2150-0200	14/9/16	58/2 9/32	56/2 7/32	25/1
	Bottle, NM, Shrink Warp	342002-9050	18	HDPE	Natural	20	71-2150-0200	14/9/16	58/2 9/32	56/2 7/32	25/1
	Bottle, NM	2003-0001	34	LDPE	Natural	20	71-2150-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 5/16
	Bottle, NM	2003-9050	18	LDPE	Natural	20	71-2150-0200	14/9/16	58/2 9/32	56/2 7/32	25/1
	Bottle, NM	2004-0001	34	HDPE	Amber	20	71-2171-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 5/16
	Bottle, NM	2004-9050	18	HDPE	Amber	20	71-2171-0200	14/9/16	58/2 9/32	56/2 7/32	25/1
	Bottle, NM	2006-0001	34	PP	Natural	20	71-2150-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 5/16
	Bottle, NM	2006-9050	18	PP	Natural	20	71-2150-0200	14/9/16	58/2 9/32	56/2 7/32	25/1
	Bottle, Square	2015-0030	39.5	PC	Clear	20	71-2150-0200	14/9/16	64/2 1/2	61/2 7/8	38/1 1/2 Square
	Bottle, Square	2016-0030	39.5	PP	Natural	20	71-2150-0200	14/9/16	64/2 1/2	61/2 7/16	38/1 1/2 Square
	Bottle, Square	2018-0030	39.5	HDPE	Natural	20	71-2150-0200	14/9/16	64/2 1/2	61/2 3/8	38/1 1/2 Square
	Media Bottle, Sterile	2019-0030	39.5	PETG	Clear	20	71-2151-0200	14/9/16	64/2 1/2	61/2 3/8	38/1 1/2 Square
	Bottle, NM	2035-0020	27	PETG	Clear	20	34-2158-0021	11/7/16	65/2 1/2	63/2 1/2	30/1 1/8
	Bottle, Env. Sample, NM	DS2085-0001	34	HDPE	Amber	20	71-2171-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 3/8
	Jar, Straight-Side, WM	2116-0015	16	PC	Clear	38	71-2150-0380	29/1 1/8	46/1 13/16	43/1 11/16	31/1 7/32
	Jar, Straight-Side, WM	2118-9050	16	PP	Natural	38	71-2150-0380	29/1 1/8	46/1 13/16	43/1 11/16	31/1 7/32
30 ml (1 oz.)	Bottle, Env. Sample, NM	2089-0001	34	HDPE	Natural	20	71-2150-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 3/8
	Bottle, Env. Sample, NM	342089-0001	34	HDPE	Natural	20	71-2150-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 3/8
	Bottle, PassPort, NM	2099-0001	35	HDPE	Natural	20	71-2150-0200	14/9/16	61/2 3/8	58/2 5/16	34/1 3/8
	Bottle, WM	2103-0001	35	LDPE	Natural	28	71-2150-0280	21/1 3/16	63/2 1/2	60/2 3/8	34/1 3/8
	Bottle, WM	2104-0001	35	HDPE	Natural	28	71-2150-0280	21/1 3/16	63/2 1/2	60/2 3/8	34/1 3/8
	Bottle, WM	2105-0001	35	PP	Natural	28	71-2150-0280	21/1 3/16	63/2 1/2	60/2 3/8	34/1 3/8
	Bottle, WM	2106-0001	35	HDPE	Amber	28	71-2171-0280	21/1 3/16	63/2 1/2	60/2 3/8	34/1 3/8
	Jar, Straight-Side, WM	2116-0030	32	PC	Clear	43	71-2150-0430	33/1 9/32	48/1 7/8	43/1 11/16	36/1 7/16
	Jar, Straight-Side, WM	2118-0001	32	PP	Natural	43	71-2150-0430	33/1 9/32	48/1 7/8	43/1 11/16	36/1 7/16
	Bottle, Validation	DS2127-0030	38	PC	Natural	20-415	71-2150-0200	14/9/16	75/2 15/16	72/2 13/16	32/1 1/4
	Bottle, Env. Sample, WM	DS2185-0001	39	HDPE	Amber	28	71-2171-0280	21/1 3/16	63/2 1/2	60/2 3/8	34/1 3/8
	Bottle, Env. Sample, WM	2189-0001	39	HDPE	Natural	28	71-2150-0280	21/1 3/16	63/2 1/2	60/2 3/8	34/1 3/8
60 ml (2 oz.)	Bottle, NM	1600-0002	65	FEP	Clear	20	71-2174-0200	14/9/16	84/3 5/16	82/3 1/4	39/1 7/16
	Bottle, NM	DS1630-0002	65	PFA	Natural	20	71-2172-0020	14/9/16	84/3 5/16	82/3 1/4	39/1 7/16
	Bottle, NM	2002-0002	65	HDPE	Natural	20	71-2150-0200	14/9/16	85/3 5/16	83/3 9/32	37/1 7/16
	Bottle, NM	2003-0002	65	LDPE	Natural	20	71-2150-0200	14/9/16	85/3 5/16	83/3 9/32	37/1 7/16
	Bottle, NM	2004-0002	66	HDPE	Amber	20	71-2171-0200	14/9/16	85/3 5/16	83/3 9/32	37/1 7/16
	Bottle, NM	2006-0002	70	PP	Natural	20	71-2150-0200	14/9/16	85/3 5/16	83/3 9/32	37/1 7/16
	Bottle, Square	2015-0060	78	PC	Clear	24	71-2150-0240	18/11/16	83/3 9/32	81/3 3/16	41/1 5/8 Square
	Bottle, Square	2016-0060	78	PP	Natural	24	71-2150-0240	18/11/16	83/3 9/32	81/3 3/16	41/1 5/8 Square
	Bottle, Square	2018-0060	78	HDPE	Natural	24	71-2150-0240	18/11/16	83/3 1/4	81/3 3/16	41/1 5/8 Square
	Media Bottle, Sterile	2019-0060	78	PETG	Clear	24	71-2151-0240	18/11/16	82/3 1/4	80/3 1/8	41/1 5/8 Square
	Bottle, Env. Sample, NM	DS2085-0002	69	HDPE	Amber	20	71-2171-0200	14/9/16	86/3 3/8	83/3 9/32	39/1 1/2
	Bottle, Env. Sample, NM	2089-0002	69	HDPE	Natural	20	71-2150-0200	14/9/16	86/3 3/8	83/3 9/32	39/1 1/2
	Bottle, Env. Sample	342089-0002	69	HDPE	Natural	20	71-2150-0200	14/9/16	86/3 3/8	83/3 9/32	39/1 1/2
	Bottle, PassPort, NM	2099-0002	65	HDPE	Natural	20	71-2150-0200	14/9/16	84/3 5/16	82/3 1/4	39/1 1/2
	Bottle, WM	2103-0002	70	LDPE	Natural	28	71-2150-0280	21/13/16	86/3 3/8	83/3 9/32	39/1 1/2
	Bottle, WM	2104-0002	70	HDPE	Natural	28	71-2150-0280	21/13/16	86/3 3/8	83/3 9/32	39/1 1/2
	Bottle, WM	2105-0002	70	PP	Natural	28	71-2150-0280	21/13/16	86/3 3/8	83/3 9/32	39/1 1/2
	Bottle, WM	2106-0002	70	HDPE	Amber	28	71-2171-0280	21/13/16	86/3 3/8	83/3 9/32	39/1 1/2
	Bottle, WM, Square	2110-0002	68	PP	Natural	28	71-2150-0280	21/13/16	83/3 3/16	79/3 1/8	36/1 7/16 Square
	Bottle, WM, Square	2114-0002	68	HDPE	Natural	28	71-2150-0280	21/13/16	83/3 3/16	79/3 1/8	36/1 7/16 Square
	Jar, Straight-Side, WM	2116-0060	60	PC	Clear	53	71-2150-0530	43/1 11/16	45/1 7/8	43/1 11/16	48/1 7/8
	Jar, Straight-Side, WM	2117-0060	60	PMP	Clear	53	71-2150-0530	43/1 11/16	45/1 7/8	43/1 11/16	48/1 7/8
	Jar, Straight-Side, WM	2118-0002	60	PP	Natural	53	71-2150-0530	43/1 11/16	45/1 7/8	43/1 11/16	48/1 7/8

Bottles

Nominal Capacity	Description	Catalog Number	Approx. Brim Cap., ml	Material	Color	Screw Closure Size, mm	Closure Cat. No.	I.D. Neck, mm/in.	Hgt. w/ Closure, mm/in.	Hgt. w/out Closure, mm/in.	O.D. Bottle, mm/in.
60 ml (2 oz.)	Bottle, Env. Sample, WM	DS2185-0002	70	HDPE	Amber	28	71-2171-0280	21/13/16	86/3 3/8	83/3 1/4	38/1 1/2
	Bottle, Env. Sample, WM	2189-0002	70	HDPE	Natural	28	71-2150-0280	21/13/16	86/3 3/8	83/3 1/4	38/1 1/2
	Bottle, Env. Sample, WM	33-2189-0002	70	HDPE	Natural	28	71-2150-0280	21/13/16	86/3 3/8	83/3 1/4	38/1 1/2
	Bottle, NM	1600-0004	140	FEP	Clear	24	71-2174-0240	17/11/16	115/4 1/2	112/4 3/8	46/11 3/16
	Bottle, NM	1630-0004	140	PFA	Natural	38-430	71-2172-0384	24/15/16	127/5	121/4 3/16	46/11 3/16
	Bottle, NM	DS2000-0004	145	PVC	Clear	24	71-2150-0240	18/11/16	115/4 1/2	112/4 3/8	46/11 3/16
	Bottle, NM	2002-0004	137	HDPE	Natural	24	71-2150-0240	18/11/16	101/4	99/3 7/8	50/1 15/16
	Bottle, NM	2003-0004	140	LDPE	Natural	24	71-2150-0240	18/11/16	101/4	99/3 7/8	50/1 15/16
	Bottle, NM	DS2004-0004	140	HDPE	Amber	24	71-2171-0240	18/11/16	101/4	99/3 7/8	50/1 15/16
	Bottle, NM	2006-0004	140	PP	Natural	24	71-2150-0240	18/11/16	101/4	99/3 7/8	50/1 15/16
	Bottle, WM, Rect.	2007-0004	140	HDPE	Natural	28	71-2150-0280	21/13/16	102/4	99/3 7/8	61x38/2 3/8x1 1/2
	Bottle, WM, Rect.	2009-0004	140	HDPE	Amber	28	71-2171-0280	21/13/16	102/4	99/3 7/8	61x38/2 3/8x1 1/2
	Bottle, Square	2015-0125	175	PC	Clear	38-430	71-2160-0384	28/1 1/8	110/4 5/16	105/4 1/8	54/2 1/8 Square
	Bottle, Square	2016-0125	175	PP	Natural	38-430	71-2160-0384	28/1 1/8	110/4 5/16	105/4 1/8	54/2 1/8 Square
	Bottle, Square	2018-0125	175	HDPE	Natural	38-430	71-2160-0384	28/1 1/8	110/4 5/16	105/4 1/8	54/2 1/8 Square
	Media Bottle, Sterile	2019-0125	175	PETG	Clear	38-430	71-2151-0384	28/1 1/8	110/4 5/16	105/4 1/8	54/2 1/8 Square
	Bottle, Env. Sample, NM	DS2085-0004	143	HDPE	Amber	24	71-2171-0240	18/11/16	104/4 3/32	102/4	50/1 15/16
	Bottle, Env. Sample, NM	2089-0004	143	HDPE	Natural	24	71-2150-0240	18/11/16	104/4 3/32	102/4	50/1 15/16
125 ml (4 oz.)	Bottle, PassPort, NM	2099-0004	140	HDPE	Natural	24	71-2150-0240	18/11/16	101/4	98/3 7/8	51/2
	Bottle, WM	2100-0004	134	FEP	Clear	33	71-2174-0330	25/1	117/4 5/8	113/4 7/16	46/1 13/16
	Bottle, WM	2103-0004	150	LDPE	Natural	38	71-2150-0380	28/1 1/8	99/3 7/8	96/3 3/4	50/2
	Bottle, WM	2104-0004	150	HDPE	Natural	38	71-2150-0380	28/1 1/8	99/3 7/8	96/3 3/4	50/2
	Bottle, WM	2105-0004	150	PP	Natural	38	71-2150-0380	28/1 1/8	99/3 7/8	96/3 3/4	50/2
	Bottle, WM	2106-0004	150	HDPE	Amber	38	71-2171-0380	28/1 1/8	99/3 7/8	96/3 3/4	50/2
	Bottle, WM	2107-0004	140	PMP	Clear	33	71-2150-0330	28/1 1/8	114/4 1/2	112/4 7/16	46/1 13/16
	Jar, Straight-Side, WM	2116-0125	182	PC	Clear	70	71-2154-0700	64/2 1/2	74/2 15/16	64/2 1/2	64/2 1/2
	Jar, Straight-Side, WM	2117-0125	182	PMP	Clear	70	71-2154-0700	64/2 1/2	74/2 15/16	64/2 1/2	64/2 1/2
	Jar, Straight-Side, WM	2118-0004	182	PP	Natural	70	71-2154-0700	64/2 1/2	74/2 15/16	64/2 1/2	64/2 1/2
	Jar, Straight-Side, WM	2119-0125	182	PC	Gray	70	71-2154-0700	64/2 1/2	74/2 15/16	64/2 1/2	64/2 1/2
	Bottle, Env. Sample, WM	DS2185-0004	150	HDPE	Amber	38	71-2171-0380	28/1 1/8	100/3 5/16	96/3 3/4	51/2
	Bottle, Env. Sample, WM	2189-0004	150	HDPE	Natural	38	71-2150-0380	28/1 1/8	100/3 5/16	96/3 3/4	51/2
	Bottle, Fluorinated, WM	2197-0004	150	FLPE	Natural	38	—	28/1 1/8	99/3 15/16	96/3 3/4	50/2
	Bottle, PassPort, WM	2199-0004	150	HDPE	Natural	38	71-2150-0380	28/1 1/8	99/3 15/16	96/3 3/4	50/2
	Biotainer Bottle, Sterile	3025-42	174	PETG	Clear	38	—	28/1 1/8	105/4 1/8	101/4	52/2 1/16
	Biotainer Bottle, Sterile	3030-42	174	PC	Lt. Blue	38	—	28/1 1/8	105/4 1/8	105/4 1/8	52/2 1/16 Square
	Bottle, Env. Sample, NM	342089-0004	143	HDPE	Natural	24	71-2150-0240	18/11/16	104/4 3/32	102/4	50/1 15/16
	Bottle, Low Part./Low Metal	381600-0004	140	FEP	Clear	24	71-2174-0240	17/11/16	115/4 1/2	112/4 3/8	11/3/16
	Bottle, Low Part./Low Metal	382003-0004	140	LDPE	Natural	24	71-2150-0240	18/11/16	101/4	99/3 7/8	50/1 15/16
	Bottle, Low Particulate	382099-0125	150	HDPE	Natural	24	71-2150-0240	18/11/16	101/4	99/3 7/8	50/2
	Bottle, NM	2002-0006	185	HDPE	Natural	24	71-2150-0240	18/11/16	125/4 15/16	122/4 13/16	54/2 1/8
	Bottle, WM, Square	2110-0006	185	PP	Natural	38	71-2150-0380	28/1 1/8	102/4	103/4 1/16	51/2 Square
	Bottle, WM, Square	2114-0006	185	HDPE	Natural	38	71-2150-0380	28/1 1/8	106/4	103/4 1/16	51/2 Square
175 ml (6 oz.)	Bottle, NM, Dilution	2500-0280	210	PSF	Clear	28-415	71-2150-0280	21/13/16	153/6	150/5 15/16	45/1 3/4 Square
	Bottle, WM, Dilution	2500-0380	220	PSF	Clear	38-415	71-2150-0380	28/1 1/8	153/6	150/5 15/16	45/1 3/4 Square
	Bottle, NM, Dilution	2505-0280	210	PPCO	Natural	28-415	71-2150-0280	21/13/16	153/6	150/5 15/16	45/1 3/4 Square
	Bottle, WM, Dilution	2505-0380	220	PPCO	Natural	38-415	71-2150-0380	28/1 1/8	153/6	150/5 15/16	45/1 3/4 Square
	Bottle, NM	1600-0008	240	FEP	Clear	24	71-2174-0240	17/11/16	134/5 9/32	131/5 5/32	60/2 3/8
	Bottle, NM	1630-0008	240	PFA	Natural	38-430	71-2172-0384	24/15/16	146/5 3/4	139/5 1/2	59/2 5/16
	Bottle, NM	DS2000-0008	280	PVC	Clear	24	71-2150-0240	17/11/16	131/5 5/32	129/5 1/16	60/2 3/8
	Bottle, NM	2002-0008	285	HDPE	Natural	24	71-2150-0240	18/11/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, NM	2003-0008	285	LDPE	Natural	24	71-2150-0240	18/11/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, NM	2004-0008	285	HDPE	Amber	24	71-2171-0240	18/11/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, NM	2006-0008	285	PP	Natural	24	71-2150-0240	18/11/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, WM, Rect.	2007-0008	300	HDPE	Natural	38	71-2150-0380	28/1 1/8	117/4 5/8	114/4 1/2	76x51/3x2
250 ml (8 oz.)	Bottle, WM, Rect.	2009-0008	300	HDPE	Amber	38	71-2171-0380	28/1 1/8	117/4 5/8	114/4 1/2	76x51/3x2
	Bottle, Square	2015-0250	325	PC	Clear	38-430	71-2160-0384	28/1 1/8	146/5 3/4	142/5 9/16	57/2 1/4 Square
	Bottle, Square	2016-0250	325	PP	Natural	38-430	71-2160-0384	28/1 1/8	146/5 3/4	142/5 9/16	61/2 3/8 Square
	Bottle, Square	2018-0250	325	HDPE	Natural	38-430	71-2160-0384	28/1 1/8	146/5 3/4	142/5 9/16	61/2 3/8 Square
	Media Bottle, Sterile	2019-0250	325	PETG	Clear	38-430	71-2151-0384	28/1 1/8	146/5 3/4	142/5 9/16	61/2 3/8 Square
	Bottle, Env. Sample, NM	DS2085-0008	289	HDPE	Amber	24	71-2171-0240	18/11/16	133/5 1/4	131/5 5/32	61/2 3/8
	Bottle, Env. Sample, NM	2089-0008	289	HDPE	Natural	24	71-2150-0240	18/11/16	133/5 1/4	131/5 5/32	61/2 3/8
	Bottle, Fluorinated, NM	2097-0008	285	FLPE	Natural	24	—	18/11/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, PassPort, NM	2099-0008	285	HDPE	Natural	24	71-2150-0240	18/11/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, WM	2100-0008	260	FEP	Clear	43	71-2174-0430	33/1 5/16	128/4 1/32	122/4 13/16	59/2 5/16
	Bottle, WM	2103-0008	290	LDPE	Natural	43	71-2150-0430	33/1 5/16	131/5 5/32	127/5	61/2 3/8
	Bottle, WM	2104-0008	290	HDPE	Natural	43	71-2150-0430	33/1 5/16	131/5 5/32	127/5	61/2 3/8

Nominal Capacity	Description	Catalog Number	Approx. Brim Cap., ml	Material	Color	Screw Closure Size, mm	Closure Cat. No.	I.D. Neck, mm/in.	Hgt. w/ Closure, mm/in.	Hgt. w/out Closure, mm/in.	O.D. Bottle, mm/in.
	Bottle, WM	2105-0008	290	PP	Natural	43	71-2150-0430	33/1 5/16	131/5 5/32	127/5	61/2 3/8
	Bottle, WM	2106-0008	290	HDPE	Amber	43	71-2171-0430	33/1 5/16	131/5 5/32	127/5	61/2 3/8
	Bottle, WM	2107-0008	270	PMP	Clear	43	71-2150-0430	33/1 5/16	125/4 15/16	122/4 13/16	58/2 5/16
	Bottle, WM, Square	2110-0008	290	PP	Natural	43	71-2150-0430	33/1 5/16	116/4 9/16	112/4 7/16	61/2 3/8 Square
	Bottle, WM, Square	2114-0008	290	HDPE	Natural	43	71-2150-0430	33/1 5/16	116/4 9/16	112/4 7/16	61/2 3/8 Square
	Jar, Straight-Side, WM	2116-0250	310	PC	Clear	70	71-2154-0700	64/2 1/2	119/4 11/16	109/4 9/32	75/2 15/16
	Jar, Straight-Side, WM	2117-0250	310	PMP	Clear	70	71-2154-0700	64/2 1/2	119/4 11/16	109/4 9/32	75/2 15/16
250 ml	Jar, Straight-Side, WM	2118-0008	310	PP	Natural	70	71-2154-0700	64/2 1/2	119/4 11/16	109/4 9/32	75/2 15/16
(8 oz.)	Jar, Straight-Side, WM	2119-0250	310	PC	Gray	70	71-2154-0700	64/2 1/2	119/4 11/16	109/4 9/32	75/2 15/16
	Bottle, Heavy Duty	DS2126-0250	310	PP	Natural	53B	712160-0530	34/1 1/8	133/5 1/4	126/4 31/32	73/2 57/64
	Bottle, Validation	DS2127-0250	250	PC	White	53B	71-2160-0430	45/1 3/4	135/5 5/16	129/5 1/8	74/2 15/16
	Bottle, Env. Sample, WM	DS2185-0008	300	HDPE	Amber	43	71-2171-0430	33/1 5/16	131/5 5/32	127/5	61/2 7/16
	Bottle, Env. Sample, WM	2189-0008	300	HDPE	Natural	43	71-2150-0430	33/1 5/16	131/5 5/32	127/5	61/2 7/16
	Bottle, Fluorinated, WM	2197-0008	290	FLPE	Natural	43	71-2150-0430	33/1 5/16	131/5 5/32	127/5	61/2 7/16
	Bottle, PassPort, WM	2199-0008	290	HDPE	Natural	43	71-2150-0430	33/1 5/16	131/5 5/32	127/5	61/2 7/16
	Bottle, Fluorinated, Solvent Wash	2421-0250	250	FLPE	Natural	24	—	18/1 1/16	173/6 13/16	130/5 1/8	61/2 3/8
	Bottle, Low Particulate	382099-0250	250	HDPE	Natural	24	71-2150-0240	18/1 1/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, Env. Sample	342089-0008	289	HDPE	Natural	24	71-2150-0240	18/1 1/16	133/5 1/4	131/5 5/32	61/2 3/8
	Bottle, Low Part./Low Metal	381600-0008	240	FEP	Clear	24	71-2174-0240	17/1 1/16	134/5 9/32	131/5 5/32	60/2 3/8
	Bottle, Low Part./Low Metal	382003-0008	285	LDPE	Natural	24	71-2150-0240	18/1 1/16	133/5 1/4	130/5 1/8	61/2 3/8
	Bottle, NM	1600-0016	520	FEP	Clear	28	71-2174-0280	20/1 3/16	166/6 9/16	162/6 3/8	73/2 7/8
	Bottle, NM	DS1620-0016	520	FEP	Black	28	71-2173-0280	20/1 3/16	166/6 9/16	162/6 3/8	73/2 7/8
	Bottle, NM	1630-0016	520	PFA	Natural	38-430	71-2172-0384	24/1 5/16	181/7 1/8	176/6 15/16	72/3 13/16
	Bottle, NM	DS2000-0016	550	PVC	Clear	28	71-2150-0280	20/1 3/16	170/6 11/16	165/6 1/2	73/2 7/8
	Bottle, NM	2002-0016	525	HDPE	Natural	28	71-2150-0280	21/1 3/16	170/6 11/16	167/6 9/16	73/2 7/8
	Bottle, NM	2002-9016	525	HDPE	Natural	38-430	71-2160-0384	27/1 1/16	170/6 11/16	167/6 9/16	73/2 7/8
	Bottle, NM	2003-0016	525	LDPE	Natural	28	71-2150-0280	21/1 3/16	170/6 11/16	167/6 9/16	73/2 7/8
	Bottle, NM	2003-9016	525	LDPE	Natural	38-430	71-2160-0384	27/1 1/16	170/6 11/16	167/6 9/16	73/2 7/8
	Bottle, NM	2004-0016	525	HDPE	Amber	28	71-2171-0280	21/1 3/16	170/6 11/16	167/6 9/16	73/2 7/8
	Bottle, NM	2006-0016	525	PP	Natural	28	71-2150-0280	21/1 3/16	170/6 11/16	167/6 9/16	73/2 7/8
	Bottle, WM, Rect.	2007-0016	560	HDPE	Natural	48	71-2150-0480	37/1 1/2	147/5 3/4	142/5 9/16	94x60/3 13/16x2 3/16
	Bottle, WM, Rect.	2009-0016	560	HDPE	Amber	48	71-2171-0480	37/1 1/2	147/5 3/4	142/5 9/16	94x58/3 11/16x2 3/16
	Bottle, Square	2015-0500	600	PC	Clear	38-430	71-2160-0384	28/1 1/8	177/7	173/6 13/16	74/2 2/16 Square
	Bottle, Square	2016-0500	600	PP	Natural	38-430	71-2160-0384	28/1 1/8	177/7	173/6 13/16	74/2 2/16 Square
	Bottle, Square	2018-0500	600	HDPE	Natural	38-430	71-2160-0384	28/1 1/8	177/7	173/6 13/16	74/2 2/16 Square
	Media Bottle, Sterile	2019-0500	600	PETG	Clear	38-430	71-2160-0384	28/1 1/8	177/7	173/6 13/16	74/2 2/16 Square
	Bottle, Env. Sample, NM	DS2085-0016	555	HDPE	Amber	28	71-2171-0280	21/1 3/16	171/6 3/4	168/6 5/8	73/2 7/8
	Bottle, Env. Sample, NM	2089-0016	520	HDPE	Natural	28	71-2150-0280	21/1 3/16	171/6 3/4	168/6 5/8	73/2 7/8
	Bottle, Fluorinated, NM	2097-0016	525	FLPE	Natural	28	—	21/1 3/16	171/6 3/4	168/6 5/8	73/2 7/8
500 ml	Bottle, PassPort, NM	2099-0016	525	HDPE	Natural	28	71-2150-0280	21/1 3/16	171/6 3/4	168/6 5/8	73/2 7/8
(16 oz.)	Bottle, WM	2100-0016	545	FEP	Clear	48	71-2174-0480	38/1 1/2	165/6 1/2	159/6 1/4	71/2 13/16
	Bottle, WM	2103-0016	545	LDPE	Natural	53	71-2150-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, WM	2104-0016	545	HDPE	Natural	53	71-2150-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, WM	2105-0016	550	PP	Natural	53	71-2150-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, WM	2106-0016	545	HDPE	Amber	53	71-2171-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, WM	2107-0016	520	PMP	Clear	48	71-2150-0480	38/1 1/2	155/6 1/8	152/6	71/2 13/16
	Bottle, WM, Square	2110-0016	570	PP	Natural	53	71-2150-0530	43/1 11/16	146/5 3/4	141/5 9/16	74/2 15/16 Square
	Bottle, WM, Square	2114-0016	570	HDPE	Natural	53	71-2150-0530	43/1 11/16	146/5 3/4	141/5 9/16	74/2 15/16 Square
	Jar, Mason	2115-0500	600	PP	Natural	70	71-2154-0700	61/2 3/8	175/6 7/8	165/6 1/2	75/3
	Jar, Straight-Side, WM	2116-0500	675	PC	Clear	120	71-2155-1200	112/4 7/16	88/3 7/16	76/3	112/4 7/16
	Jar, Straight-Side, WM	2117-0500	675	PMP	Clear	120	71-2155-1200	112/4 7/16	88/3 7/16	76/3	112/4 7/16
	Jar, Straight-Side, WM	2118-0016	675	PP	Natural	120	71-2155-1200	112/4 7/16	88/3 7/16	76/3	112/4 7/16
	Jar, Straight-Side, WM	2119-0500	675	PC	Gray	120	71-2155-1200	112/4 7/16	88/3 7/16	76/3	112/4 7/16
	Bottle, Env. Sample, WM	DS2185-0016	575	HDPE	Amber	53	71-2171-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, Env. Sample, WM	2189-0016	575	HDPE	Natural	53	71-2150-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, Fluorinated, WM	2197-0016	550	FLPE	Natural	53	71-2150-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, PassPort, WM	2199-0016	550	HDPE	Natural	53	71-2150-0530	44/1 3/4	168/6 5/8	164/6 7/16	73/2 7/8
	Bottle, Large, NM	2205-0016	625	PC	Clear	38-430	71-2160-0384	27/1 1/16	180/7 1/16	175/6 7/8	82/3 7/32
	Bottle, Env. Sample	342089-0016	520	HDPE	Natural	28	71-2150-0280	21/1 3/16	171/6 3/4	168/6 5/8	73/2 7/8
	Bottle, Low Part./Low Metal	381600-0016	520	FEP	Clear	28	71-2174-0280	20/1 3/16	166/6 9/16	162/6 3/8	73/2 7/8
	Bottle, Low Part./Low Metal	382003-0016	525	LDPE	Natural	28	71-2150-0280	21/1 3/16	170/6 11/16	167/6 9/16	73/2 7/8
	Bottle, Low Particulate	382099-0500	550	HDPE	Natural	28	71-2150-0380	21/1 3/16	170/6 11/16	167/6 9/16	73/2 7/8
	Biotainer Bottles, Sterile	3005-42	670	PETG	Clear	38	—	28/1 1/8	176/7	172/6 3/16	77/3 Square
	Biotainer Bottles, Sterile	3005-70	670	PETG	Clear	38	—	28/1 1/8	176/7	172/6 3/16	77/3 9/16 Square
1 Liter	Bottle, NM	1600-0032	1,050	FEP	Clear	38	71-2174-0380	26/1 1/32	203/8	198/7 13/16	90/3 9/16
(32 oz.)	Bottle, NM	DS1620-0032	1,050	FEP	Black	38	71-2173-0380	26/1 1/32	203/8	198/7 13/16	90/3 9/16
	Bottle, NM	1630-0032	1,050	PFA	Natural	38-430	71-2172-0384	24/1 5/16	216/8 1/2	210/8 1/4	90/3 9/16

Bottles

Nominal Capacity	Description	Catalog Number	Approx. Brim Cap., ml	Material	Color	Screw Closure Size, mm	Closure Cat. No.	I.D. Neck, mm/in.	Hgt. w/ Closure, mm/in.	Hgt. w/out Closure, mm/in.	O.D. Bottle, mm/in.
	Bottle, NM	DS2000-0032	1,140	PVC	Clear	38	71-2150-0380	26/1 1/32	206/8 1/8	203/8	91/3 9/16
	Bottle, NM	2002-0032	1,060	HDPE	Natural	38-430	71-2160-0384	27/1 1/16	216/8 1/2	212/8 3/8	91/3 9/16
	Bottle, NM	2003-0032	1,060	LDPE	Natural	38-430	71-2160-0384	27/1 1/16	216/8 1/2	212/8 3/8	91/3 9/16
	Bottle, NM	2004-0032	1,060	HDPE	Amber	38-430	71-2171-0384	27/1 1/16	216/8 1/2	212/8 3/8	91/3 9/16
	Bottle, NM	2006-0032	1,060	PP	Natural	38-430	71-2160-0384	27/1 1/16	216/8 1/2	212/8 3/8	91/3 9/16
	Bottle, WM, Rect.	2007-0032	1,180	HDPE	Natural	53	71-2150-0530	44/1 3/4	180/7 1/16	175/6 7/8	125x71/4 15/16x2 13/16
	Bottle, WM, Rect.	2009-0032	1,170	HDPE	Amber	53	71-2171-0530	44/1 3/4	180/7 1/16	175/6 7/8	125x71/4 15/16x2 13/16
	Bottle, Square	2015-1000	1,225	PC	Clear	38-430	71-2160-0384	28/1 1/8	220/8 11/16	215/8 7/16	94/3 11/16 Square
	Bottle, Square	2016-1000	1,225	PP	Natural	38-430	71-2160-0384	28/1 1/8	220/8 11/16	215/8 7/16	94/3 11/16 Square
	Bottle, Square	2018-1000	1,225	HDPE	Natural	38-430	71-2160-0384	28/1 1/8	220/8 11/16	215/8 7/16	94/3 11/16 Square
	Media Bottle, Sterile	2019-1000	1,225	PETG	Clear	38-430	71-2151-0384	28/1 1/8	220/8 11/16	215/8 7/16	94/3 11/16 Square
	Bottle, Env. Sample, NM	DS2085-0032	1,090	HDPE	Amber	38-430	71-2171-0384	27/1 1/16	217/8 9/16	213/8 3/8	92/3 5/8
	Bottle, Env. Sample, NM	2089-0032	1,090	HDPE	Natural	38-430	71-2160-0384	27/1 1/16	217/8 9/16	213/8 3/8	92/3 5/8
	Bottle, Fluorinated, NM	2097-0032	1,060	FLPE	Natural	38-430	—	27/1 1/16	216/8 1/2	212/8 3/8	91/3 5/8
	Bottle, PassPort, NM	2099-0032	1,060	HDPE	Natural	38-430	71-2160-0384	27/1 1/16	216/8 1/2	212/8 3/8	91/3 5/8
	Bottle, Low Particulate	382099-1000	1,100	HDPE	Natural	38-430	71-2160-0384	27/1 1/16	216/8 1/2	212/8 3/8	91/3 5/8
1 Liter	Bottle, WM	2100-0032	1,030	FEP	Clear	53	71-2174-0530	43/1 11/16	209/8 7/32	201/7 11/16	91/3 5/8
(32 oz.)	Bottle, WM	2103-0032	1,100	LDPE	Natural	63	71-2150-0630	53/2 1/16	199/7 7/8	195/7 11/16	91/3 5/8
	Bottle, WM	2104-0032	1,100	HDPE	Natural	63	71-2150-0630	53/2 1/16	199/7 7/8	195/7 11/16	91/3 5/8
	Bottle, WM	2105-0032	1,100	PP	Natural	63	71-2150-0630	53/2 1/16	199/7 7/8	195/7 11/16	91/3 5/8
	Bottle, WM	2106-0032	1,100	HDPE	Amber	63	71-2171-0630	53/2 1/16	199/7 7/8	195/7 11/16	91/3 5/8
	Bottle, WM	2107-0032	1,090	PMP	Clear	53	71-2150-0530	43/1 11/16	203/8	201/7 15/16	89/3 1/2
	Bottle, WM, Square	2110-0032	1,190	PP	Natural	63	71-2150-0630	53/2 1/16	181/7 1/8	176/6 15/16	95/3 3/4 Square
	Jar, Straight-Side, WM	DS2113-1000	1,075	PFA	Natural	120	—	111/4 3/8	132/5 3/16	130/5 3/32	107/4 7/32
	Bottle, WM, Square	2114-0032	1,190	HDPE	Natural	63	71-2150-0630	53/2 1/16	181/7 1/8	176/6 15/16	95/3 3/4 Square
	Jar, Mason	2115-1000	1,200	PP	Natural	70	71-2154-0700	61/2 3/8	213/8 3/8	201/7 15/16	94/3 11/16
	Jar, Straight-Side, WM	2116-1000	1,230	PC	Clear	120	71-2155-1200	112/4 7/16	151/5 5/16	130/5 3/8	112/4 7/16
	Jar, Straight-Side, WM	2117-1000	1,230	PMP	Clear	120	71-2155-1200	112/4 7/16	151/5 5/16	137/5 3/8	112/4 7/16
	Jar, Straight-Side, WM	2118-0032	1,230	PP	Natural	120	71-2155-1200	112/4 7/16	151/5 5/16	137/5 3/8	112/4 7/16
	Jar, Straight-Side, WM	2119-1000	1,230	PC	Gray	120	71-2155-1200	112/4 7/16	151/5 5/16	137/5 3/8	112/4 7/16
	Bottle, Heavy Duty	2125-1000	1,100	HDPE	Natural	53B	71-2160-0530	39/1 1/2	226/9 1/8	220/8 7/8	93/3 11/16
	Bottle, Heavy Duty	2126-1000	1,100	PP	Natural	53B	71-2160-0530	39/1 1/2	226/9 1/8	220/8 7/8	93/3 11/16
	Bottle, Env. Sample, WM	DS2185-0032	1,090	HDPE	Amber	63	71-2171-0630	52/2 1/16	199/7 13/16	195/7 11/16	91/3 5/8
	Bottle, Env. Sample, WM	2189-0032	1,090	HDPE	Natural	63	71-2150-0630	52/2 1/16	199/7 13/16	195/7 11/16	91/3 5/8
	Bottle, Fluorinated, WM	2197-0032	1,100	FLPE	Natural	63	71-2150-0630	53/2 1/16	199/7 7/8	195/7 11/16	91/3 5/8
	Bottle, PassPort, WM	2199-0032	1,100	HDPE	Natural	63	71-2150-0630	53/2 1/16	199/7 7/8	195/7 11/16	91/3 5/8
	Bottle, Large, NM	2205-0032	1,180	PC	Clear	38-430	71-2160-0384	27/1 1/16	221/8 11/16	217/8 1/2	99/3 7/8
	Carboy w/Tubulation	2302-0001	1,100	LDPE	Natural	38-430	71-2160-0384	27/1 1/16	216/8 1/2	213/8 3/8	91/3 5/8
	Biotainer Bottle, Sterile	3120-42	1,200	PC	Lt. Blue	48	36-2515-0480	37/1 15/72	201/7 29/32	–	98/3 27/32 Square
	Biotainer Bottle, Sterile	3110-42	1,200	PETG	Clear	48	–	37/1 15/72	201/7 29/32	197/7 3/4	98/3 27/32 Square
	Biotainer Bottle, Sterile	3110-35	1,200	PETG	Clear	48	–	37/1 15/72	201/7 29/32	197/7 3/4	98/3 27/32 Square
	Bottle, Env. Sample	342089-0032	1,090	HDPE	Natural	38-430	71-2160-0384	27/1 1/16	217/8 9/16	213/8 3/8	92/3 38
	Bottle, Low Part./Low Metal	381600-0032	1,050	FEP	Clear	38	71-2174-0380	26/1 1/32	23/8	198/7 13/16	90/3 9/16
	Bottle, Low Part./Low Metal	382003-0032	1,060	LDPE	Natural	38-430	71-2160-0384	27/1 1/16	216/8 1/2	212/8 3/8	91/3 9/16
1.5 Liter	Bottle, NM	2104-0048	1,560	HDPE	Natural	63	71-2150-0630	52/2 1/16	284/11 3/16	278/11	91/3 5/8
	Bottle, NM	1600-0064	2,200	FEP	Clear	38-430	71-2174-0384	25/1	245/9 5/8	239/9 7/16	121/4 3/4
	Bottle, Rect.	2007-0064	2,120	HDPE	Natural	63	71-2150-0630	51/2	242/9 1/2	234/9 3/16	152x84/6x3 5/16
	Bottle, Rect.	2009-0064	2,000	HDPE	Amber	63	71-2171-0630	51/2	242/9 1/2	234/9 3/16	152x84/6x3 5/16
	Bottle, Square	2015-2000	2,400	PC	Clear	53B	71-2160-0530	39/1 1/2	271/10 11/16	265/10 7/16	116/4 9/16
	Media Bottle, Sterile	2019-2000	2,400	PETG	Clear	53B	71-2151-0053	39/1 1/2	271/10 11/16	265/10 7/16	116/4 9/16
	Bottle, Fluorinated, NM	2097-0005	2,100	FLPE	Natural	38-430	—	27/1 1/16	250/9 13/16	246/9 11/16	120/4 3/4
	Bottle, WM	2100-0064	2,050	FEP	Clear	53	71-2174-0530	43/1 11/16	232/9 1/8	228/9	119/4 11/16
2 Liter	Bottle, EP Tox, WM	2101-2200	2,300	FEP	Clear	100	—	89/3 1/2	241/9 1/2	235/9 1/4	119/4 11/16
(1/2 gal.)	Jar, Mason	2115-2000	2,135	PP	Natural	70	71-2154-0700	61/2 3/8	244/9 5/8	233/9 3/16	120/4 3/4
	Bottle, Large, WM	2120-0005	2,140	HDPE	Natural	100	71-2150-1000	89/3 1/2	244/9 5/8	235/9 1/4	119/4 11/16
	Bottle, Large, WM	2121-0005	2,200	PP	Natural	100	71-2150-1000	89/3 1/2	244/9 5/8	235/9 1/4	120/4 3/4
	Bottle, Large, Fluorinated, WM	2124-0005	2,140	FLPE	Natural	100	71-2150-1000	89/3 1/2	244/9 5/8	235/9 1/4	120/4 3/4
	Bottle, Heavy Duty	2125-2000	2,200	HDPE	Natural	53B	71-2160-0530	39/1 1/2	260/10 1/4	254/10	119/4 11/16
	Bottle, Heavy Duty	2126-2000	2,200	PP	Natural	53B	71-2160-0530	39/1 1/2	260/10 1/4	254/10	119/4 11/16
	Bottle, NM	2202-0005	2,100	LDPE	Natural	38-430	71-2160-0384	25/1	249/91 13/16	244/9 5/8	121/4 3/4
	Bottle, Validation	DS2127-2000	2,370	PC	Clear	53B	71-2160-0530	42/1 21/32	296/10 5/8	260/10 1/4	123/4 27/32
	Bottle, NM	2203-0005	2,200	PP	Natural	38-430	71-2160-0384	25/1	249/91 13/16	244/9 5/8	121/4 3/4
	Bottle, Large, NM	2204-0005	2,100	PP	Amber	38-430	71-2171-0384	25/1	249/91 13/16	244/9 5/8	121/4 3/4
	Bottle, Large, NM	DS2205-0210	2,275	PC	Clear	38-430	71-2160-0384	25/1	249/91 13/16	244/9 5/8	121/4 3/4
	Carboy, w/Tubulation	2302-0005	2,100	LDPE	Natural	38-430	71-2160-0384	25/1	249/91 13/16	244/9 5/8	121/4 3/4

Nominal Capacity	Description	Catalog Number	Approx. Brim Cap., ml	Material	Color	Screw Closure Size, mm	Closure Cat. No.	I.D. Neck, mm/in.	Hgt. w/ Closure, mm/in.	Hgt. w/out Closure, mm/in.	O.D. Bottle, mm/in.
	Biotainer Bottle, Sterile	3233-42	2,400	PC	Lt. Blue	48	36-2515-0480	36/1 13/32	265/10 7/16	—	116/4 9/16 Square
2 Liter	Biotainer Bottle, Sterile	3230-42	2,400	PETG	Clear	48	—	36/1 13/32	265/10 7/16	197/7 3/4	116/4 9/16 Square
(1/2 gal.)	Biotainer Bottle, Sterile	3230-20	2,400	PETG	Clear	48	—	36/1 13/32	265/10 7/16	197/7 3/4	116/4 9/16 Square
2.5 Liter (5/8 gal.)	Bottle, Large, NM	DS2205-0250	2,730	PC	Clear	38-430	71-2160-0384	25/1	295/11 5/8	290/11 7/16	121/4 3/4
3 Liter (4/5 gal.)	Jar, Mason	2115-3000	3,325	PP	Natural	70	71-2154-0700	61/2 3/8	246/9 11/16	236/9 5/16	155/6 1/8
	Bottle, Fluorinated, NM	2097-0010	4,160	FLPE	Natural	38-430	—	26/1 1/32	334/13 1/8	330/13	153/6
	Bottle, PassPort, NM	2099-0010	4,300	HDPE	Natural	38-430	71-2160-0384	27/1 1/16	334/13 1/8	330/13	153/6
	Bottle, Large, WM	2120-0010	4,200	HDPE	Natural	100	71-2150-1000	89/3 1/2	288/11 5/16	279/11	153/6
	Bottle, Large, WM	2121-0010	4,300	PP	Natural	100	71-2150-1000	89/3 1/2	288/11 5/16	279/11	153/6
	Bottle, Large, WM, Square	2122-0010	4,300	PP	Natural	100	71-2150-1000	89/3 1/2	282/11 1/8	277/10 15/16	142/5 9/16 Square
	Bottle, Large, WM, Square	2123-0010	4,300	HDPE	Natural	100	71-2150-1000	89/3 1/2	292/11 1/2	284/11 3/16	142/5 9/16 Square
	Bottle, Heavy Duty	2125-4000	4,100	HDPE	Natural	83B	71-2160-0830	65/2 9/16	338/13 5/16	327/12 7/8	155/6 1/8
	Bottle, Heavy Duty	2126-4000	4,100	PP	Natural	83B	71-2160-0830	65/2 9/16	338/13 5/16	327/12 7/8	155/6 1/8
4 Liter	Bottle, NM	2202-0010	4,300	LDPE	Natural	38-430	71-2160-0384	25/1	333/13 1/8	328/12 15/16	152/6
(1 gal.)	Bottle, NM	2203-0010	4,400	PP	Natural	38-430	71-2160-0384	25/1	333/13 1/8	328/12 15/16	152/6
	Bottle, Large, NM	2204-0010	4,300	PP	Amber	38-430	71-2171-0384	25/1	333/13 1/8	328/12 15/16	152/6
	Bottle, Large, NM	DS2205-0010	4,500	PC	Clear	38-430	71-2160-0384	25/1	333/13 1/8	328/12 15/16	152/6
	Jug, w/Handle	2220-0010	4,000	LDPE	Natural	38-430	71-2160-0384	25/1	304/111 15/16	301/11 7/8	152/6
	Jug, w/Handle	2221-0010	4,100	PP	Natural	38-430	71-2160-0384	25/1	304/111 15/16	301/11 7/8	152/6
	Carboy, w/Tubulation	2302-0010	4,200	LDPE	Natural	38-430	71-2160-0384	25/1	333/121 15/16	328/13	152/6
	Carboy, w/Spigot	2318-0010	3,800	LDPE	Natural	38-430	71-2160-0384	26/1 1/32	335/13 3/16	330/13	154/6 1/6
	Biotainer Bottle, Sterile	3751-42	3,900	HDPE	Natural	38	—	28/1 7/64	299/11 49/64	295/11 5/8	143/5 5/8 Square
	Biotainer Bottle, Sterile	3750-24	3,900	HDPE	Natural	38	—	28/1 7/64	299/11 49/64	295/11 5/8	143/5 5/8 Square
	Biotainer Bottle, Sterile	3751-24	3,900	HDPE	Natural	38	—	28/1 7/64	299/11 49/64	295/11 5/8	143/5 5/8 Square
5 Liter	Bottle, Heavy Duty	2126-5000	5,400	PP	Natural	83B	71-2160-0830	64/2 1/2	414/16 5/16	402/15 13/16	156/6 1/8
(1 1/4 gal.)	Biotainer Bottle, Sterile	3405-16	5,900	PC	Lt. Blue	48	36-2515-0480	37/1 15/32	299/11 49/64	—	155/6 17/32 Square
	Biotainer Bottle, Sterile	3405-42	5,900	PC	Lt. Blue	48	36-2515-0480	37/1 15/32	299/11 49/64	—	155/6 17/32 Square
	Biotainer Bottle, Sterile	3415-16	5,900	PETG	Clear	48	—	37/1 15/16	299/11 49/64	295/11 5/8	155/6 17/32
	Biotainer Bottle, Sterile	3415-42	5,900	PETG	Clear	48	—	37/1 15/16	299/11 49/64	295/11 5/8	155/6 17/32
6 Liter (1 1/2 gal.)	Jerrican	2240-0015	7,900	HDPE	Natural	53B	71-2160-0530	36/1 7/16	335/13 7/32	328/12 7/8	176x213/6 5/16x8 3/8

For containers greater than 50 liters, see "Tanks" or "Bioprocess/Culture Ware."

*No. 11-1/2 Rubber Stopper. Other helpful information molded into most NALGENE products includes our flask insignia, NALGENE trademark and, where appropriate, the size in ounces, milliliters or both.

Bottles/Carboys Accessories

2158 Quick Filling/Venting Closure, polypropylene, TPE Gasket

Ported 83B closure features quick disconnect fittings and inside/outside barbed tubulations. Forms a convenient fluid transfer system with the tubing of your choice. Available in 2 or 3 port styles for 1/4 inch or 3/8 inch tubing.

Socket fittings in cap have internal valves that seal when a tubulation fitting is removed so container seal integrity is maintained. Excellent for use in vacuum systems with NALGENE Heavy Duty Vacuum Carboys and Bottles (Cat. Nos. 2226, 2126). Use with NALGENE 180 heavy-wall tubing (Cat. No. 8000-0145 or 8000-0065). Polypropylene closure and fittings, TPE gasket. 2 ports on -0021 and 0022; 3 ports on -0031 and -0032. NOTE: Not recommended for vacuum use with lighter weight containers. Fitting-to-socket seals will not hold vacuum after multiple autoclavings.

Cat. No.2158	-0021	-0022	-0031	-0032
Bulkhead Fitting, in.	1/4	3/8	1/4	3/8
No. of PP Sanitary Ports	2	2	3	3
No. per Case	1	1	1	1

2159 Replacement Fittings for Quick Filling Venting Closure, polypropylene

Male polypropylene fitting with tubulation. NOTE: sizes are not interchangeable. Sizes -0001, -0002 are straight; sizes -0011 and -0012 are 90° elbow.

Cat. No.2159	-0001	-0002	-0011	-0012
Hose Barb Size, in.	1/4	3/8	1/4	3/8
No. per Case	6	6	6	6

A

DS2153 Fluid-Transfer Closure, polypropylene

Use this 70-mm closure with 500-, 1000-, 2000- and 3000-ml NALGENE Mason jars (Cat. No. 2115) for fluid transfer in the lab or field, or with NALGENE straight-sided jars (Cat. Nos. 2116, 2117, 2118, and 2119) with 70mm closures. Containers sold separately. Use for siphoning, evacuation, bleeding of fluid lines, collecting samples, transferring reagents. Two vent tubes, molded into top of closure, connect to external fluid source and to vacuum or pressure pump with 1/4-in. I.D. flexible tubing, e.g. NALGENE 180. Caution: Not designed for use under full vacuum or high pressure. Vacuum limit: 5 in. (127 mm) Hg; pressure limit: 2 psig (.137 bar). **Autoclavable**

Cat. No.DS2153	-0700
Size, mm	70
No. per Case	6

A

2162 Filling/Venting Closures, white polypropylene, TPE gasket, TPE port caps, NALGENE 50 platinum-cured silicone tubing

All-plastic closures for aseptic liquid transfer of media, biological reagents and chemicals to and from NALGENE carboys. Can be used with any large NALGENE carboys or bottles that accept 53-mm (53B) or 83-mm (83B) closures.* Choice of 1/2-inch (13-mm) or 1/4-inch (6-mm) I.D. tubing on 83B closure. Includes two pieces NALGENE 50 platinum-cured silicone tubing, Cat. No. 8060, for drop tube and splash guard. **Autoclavable**

Cat. No.2162	-0531	-0830	-0831
Overall Height (w/o Tubing) x Dia., mm	68.6 x 66.7	98 x 102	98 x 102
Overall Height (w/o Tubing) x Dia., in.	2-3/4 x 2-5/8	3-7/8 x 4	3-7/8 x 4
Closure Size, mm	53B	83B	83B
Tubing I.D., in.	1/4	1/2	1/4
No. per Pkg	1	1	1
No. per Case	6	6	6

*Refer to Bottle Specification Chart.

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

223 Carboy Vent Filter, Teflon* PTFE membrane, polypropylene housing

A compact filter for venting and solvent filtration applications. Useful for maintaining purified water stored in carboys. The Disposable Carboy Vent Filter features a Teflon PTFE (polytetrafluoroethylene) membrane. The hydrophobic membrane permits sterile venting on a slow exhaust/liquid autoclave cycle of NALGENE PP and PC carboys up to 50L. Can be used up to five times in venting applications. Non-sterile. **Autoclavable**

Cat. No.223	-0030
Membrane Surface Area, cm^2	300
Pore Size, µm	0.2
Typical Liquid Flow Rates	80 ml per min. at 0.1 bar
Typical Air Flow Rates	32 Lpm at 0.07 bar
Liquid Hold-Up Volume	<6 ml
Max. Operating Pressure	60 psig (4.1 bar) at ambient temperature
Max. Operating Temperature	60° C (at 30 psig)
Inlet and Outlet	Stepped barbed hose fitting, 1/4-in. to 1/2-in. (6.4- to 12.5-mm)
No. per Case	3

*Registered trademark of DuPont.

A

DS2176 Pour Spout, polypropylene; polyethylene insert

For all bottles with 38-430 (38-mm) neck finish.

Cat. No.DS2176	-0384
No. per Case	6

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

DS2167 Closures for Barbed Bulkhead Fittings, white polypropylene

Designed for use with NALGENE culture vessels. May be used with any NALGENE container with a 38-430 closure with ports (Cat. No. 2600) and culture vessel mixing system (Cat. No. 2602), these 38-430 polypropylene closures are pre-drilled for a 1/4- or 1/2-inch (6-13 mm) barbed bulkhead fitting. For fluid transfer on NALGENE containers with 38-430 closures. Components come unassembled. **Barbed bulkhead fitting also sold separately (Cat. No. 6149).** **Autoclavable**

Cat. No.DS2167	-0001	-0002
Bulkhead Fitting, in.	1/2	1/4
No. per Case	4	4

A

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

A

6149 Barbed Bulkhead Fittings, polypropylene fittings (2), acetal nuts (2), silicone gaskets (2), TPE port cap

All-plastic fitting permits retrofitting of most NALGENE and other manufacturers' closures for liquid transfer. Unique fitting with two barbed ends is useful wherever tubing must be attached on both ends. To install, simply drill two 5/8-inch (16-mm) diameter holes in closure, insert fittings, tighten, and attach tubing. Comes with complete directions and template for installation. Gasket and nut assemblies provide leakproof service. 53B Closure will accept two 1/4 inch fittings, but not 1/2 inch fittings. 83B closure accepts two of either size. Can be sterilized by autoclave, gas or chemical methods. For vacuum applications, use with NALGENE heavy-duty vacuum bottle or carboy Cat. No. 2126 and 2226.

Autoclavable

Cat. No.6149	-0001	-0002
Fits Tubing W, I.D., in.	1/2	1/4
Overall H x W (at widest point), mm	64 x 25	56 x 16
Overall H x W (at widest point), in.	2-1/2 x 1	2-3/16 x 5/8
No. per Pkg	2	2
No. per Case	24	24

A

6422 Quick-Action Spigots, polypropylene with high-density polyethylene tubing adapter

Standard spigot* for NALGENE carboys; accepts 5/8-inch (16-mm) I.D. tubing. Also includes HDPE tubing adapter which takes tubing with 1/4- or 5/16-inch (6-8 mm) I.D. Use Cat. No. 6432 for applications with selected solvents and other chemicals where PP spigots are unsatisfactory. Dissassemble before autoclaving. **Autoclavable**

*1-1/8" - 12 straight female threads

Cat. No.6422	-0010
Use for	NALGENE Bottles, Carboys, Lowboys, Clearboys
No. per Pkg	1
No. per Case	12

A

6432 Quick-Action Spigot, Tefzel*, ETFE, polypropylene

Chemically-resistant spigot for NALGENE carboys; accepts 5/8-inch (16-mm) I.D. tubing. Identical to Cat. No. 6422, but body and plug are Tefzel ETFE. Does not include tubing adapter. Use for applications with selected solvents and other chemicals where PP spigots are unsatisfactory. Replacement spigot for DS2327 Fluorinated rectangular carboy. Dissassemble before autoclaving.

Autoclavable *Tefzel is a registered trademark of DuPont.

Cat. No.6432	-0010
Use for	NALGENE Bottles, Carboys, Lowboys, Clearboys
No. per Pkg	1
No. per Case	2

†1-1/8-in. – 12 straight female threads.

6423 Spigot Closure, white polypropylene lock nut, TPE plug

Fits all NALGENE carboys with spigot and selected NALGENE tanks with spigot; use to replace spigot to provide leakproof seal when autoclaving liquids in a carboy. Also useful when handling could damage or accidentally turn on spigot or when spigot-less carboy is required. Included with all NALGENE carboys with spigot. **Autoclavable/Leakproof**

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Cat. No.6423	-0010
Use for	NALGENE Bottles, Carboys, Clearboys, Lowboys
Thread Size, in.	1-1/8, 12 female screw thread
No. per Pkg	4
No. per Case	24

2135 Top Works™ Flexible Systems For NALGENE Carboys and Bottles, polypropylene closures, platinum-cured silicone inserts

Flexible silicone Top Works Systems include solid, 2-port and 3-port versions. Platinum-cured silicone tubing is fused through stopper to form one-piece closure system. Permits aseptic liquid transfer from most NALGENE bottles and carboys. **Autoclavable/USPVI/Leakproof**

USP VI A

Cat. No.	NALGENE Closure Size	Closure Material (with hole)	Insert Material	No. of ports; I.D. sizes, in.	No. per Case
2135-3800	38-430	PP	Silicone	None (solid insert)	1
2135-3803	38-430	PP	Silicone	3 – (1) 1/4"; (2) 1/8"	1
2135-5300	53B	PP	Silicone	None (solid insert)	1
2135-5302	53B	PP	Silicone	2 – 1/4"	1
2135-5303	53B	PP	Silicone	3 – (1) 1/8", (2) 1/4"	1
2135-8300	83B	PP	Silicone	None, (solid insert)	1
2135-8302	83B	PP	Silicone	2 – 1/4"	1
2135-8303	83B	PP	Silicone	3 – (1) 3/8"; (2) 1/4"	1

2132 Top Works™ Systems For Media Bottle Closures–Schott, Corning* and Wheaton**, polysulfone closures with platinum-cured silicone inserts

Permit easy aseptic media transfer from common glass media bottles. **Autoclavable/USPVI/Leakproof**

*Corning is a registered trademark of Corning, Inc.

**Wheaton is a registered trademark of Wheaton Instruments.

USP VI A

Cat. No.2132	-1001	-1003
Screw Cap Size	GL45	GL45
Screw Cap Material	PSF	PSF
No. of ports, I.D., in.	None – (Solid) silicone	3 – (2) 1/4"; (1) 1/8"
No. per Case	1	1

2560 3-Ported Closures For Biotainers, polypropylene; silicone liner

Radiation-stabilized 48mm QA PP closure with 3 ports and removable silicone liner. Fits all Biotainer products with 48 mm QA neck. Use for filling/venting operations. Ports have tubulations on inside and outside of closure for attachment of tubing. Two 8 mm fluid ports accept 6-7 mm (1/4 in.) I.D. tubing. Vent port accepts 4.5mm (3/16 in.) tubing.

Cat. No.	Finish	Port I.D., in.	No. per Case
2560-0489	48 QA	(2) 1/4", (1) 3/16"	4

A

DS2168 Autoclavable Septum Closure, polypropylene closure, thermoplastic elastomer septum

Unique closure system suitable for use with any bottle or container with a 38-430 neck, including NALGENE culture vessel (Cat. No. 2600) and culture vessel mixing system (Cat. No. 2602), media bottles, and other square bottles. Allows aseptic injection of reagent or sample withdrawal without compromising sterility or integrity of contents. Use with 18 gauge or smaller needle.* **Autoclavable**

*For research use only, not for *in vitro* diagnosis or parenterals.

Cat. No.DS2168	-0384
Size, mm	38-430
No. per Case	12

A

DS2227 Magnetic Carboy Stirrer, polyvinylidene fluoride, stainless steel-reinforced shaft; Teflon* TFE stir bar; TFE impeller; polypropylene screw closure

Ideal for low-speed mixing of large volumes of media and buffer solutions on a magnetic stir plate. For use with NALGENE 10- and 20-liter carboys with 83B (83-mm) closures (Cat. No. 2210-, 2250- and 2251-series). Adjusts easily to fit either a 10- or 20-L carboy. No magnet to retrieve. Supplied with an 83-mm closure and two TFE impellers. NOTE: Must be used with a magentic stir plate. **Autoclavable**

*Or equivalent. Teflon is a registered trademark of DuPont.

Cat. No.DS2227	-0020
Closure Size, mm	83B
Shaft O.D., mm	13
Shaft O.D., in.	1/2
Shaft Length, mm	588
Shaft Length, in.	23-1/8
Stir bar Dia., mm	13
Stir bar Dia., in.	1/2
Stir Bar Length, mm	75
Stir Bar Length, in.	3
No. per Case	1

NEW

312160 Heat-Shrink Bands for NALGENE PETG Media Bottles, polyvinyl choride

The heat-shrink bands found on NALGENE® Sterile PETG Square Media Bottles (2019-XXXX) are now available separately. These bands provide a tamper-resistant seal to ensure the integrity of the bottle contents. Simply apply the recommended application torque for NALGENE closures, and slide the heat-shrink band over the closure and bottle neck; heat the band to shrink and secure contents. Bands are gamma stable and include a perforated “tear strip” feature for easy removal. They are available in 4 sizes to mate with NALGENE PETG Square Media Bottles. Packed 1,000 per case (two zipper bags of 500 each). **New**

Cat. No.312160	-0200	-0240	-0384	-0530
Fits NALGENE PETG Square Media Bottle	30ml PETG Bottle with 20-415 HDPE Closure	60ml PETG Bottle with 24-415 HDPE Closure	125ml-1000ml PETG Bottles with 38-430 HDPE Closure	2000ml PETG Bottle with 53B HDPE Closure
Bottle/Closure Cat. No.	2019-0030, 3x202x-0030	2019-0060, 3x202x-0060	2019-0125, 2019-0250, 2019-0500, 2019-1000,	2019-2000, 3x202x-2000
Torque Wrench Fittings	2195-1020	2195-1024	2195-1438	2195-1153
Application Torque	10-14 in.-lb	12-17 in.-lb	27-33 in.-lb	38-53 in.-lb

Buckets

7002 Graduated Bucket, white high-density polyethylene; polyethylene-covered bail

Coated wire handle, graduations, and wide-lipped pour spout make this ideal for transfer and transport of laboratory solutions and powders. Graduations in pints and liters. **Graduated**

Cat. No.7002	-0025
Cap., L	9.5
Cap., gal.	2-1/2
No. per Pkg	1
No. per Case	6

7012 Graduated Buckets, white polypropylene; nylon-coated wire bail

General purpose laboratory buckets have good chemical resistance and are autoclavable. Sturdy, tall with coated handles make these a lab necessity. **Autoclavable/Graduated**

Cat. No.7012	-0080	-0110	-0140
Cap., L	7.6	10.4	13.2
Cap., qts.	8	11	14
No. per Pkg	1	1	1
No. per Case	6	6	6

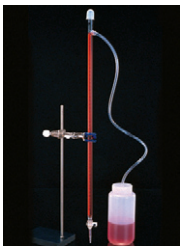
A

7102 Graduated Air-Tight Pails, white or yellow low-density polyethylene; nylon coated wire bail

Air-tight covers make these pails ideal for storage of specimens in formalin and other preservatives. Sturdy plastic-coated handles. Cat. Nos. 7102-0080 and 7102-0110 are white; Cat. No. 7102-0140 is yellow; all with white covers. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. **Biohazard/Graduated**

Cat. No.7102	-0080	-0110	-0140
Cap., L	7.6	10.4	13.2
Cap., qts.	8	11	14
Height With Cover, mm	267	305	328
Height With Cover, in.	10-1/2	12	12-7/8
Height Without Cover, mm	254	292	315
Height Without Cover, in	10	11-1/2	12-3/8
No. per Pkg	1	1	1
No. per Case	12	6	6

Burets



3640 Automatic Self-Zeroing Burets, acrylic body; polymethylpentene stopcock and tip; Teflon* TFE plug; three feet of NALGENE 380 clear plastic tubing; LDPE squeeze bottle with polypropylene screw closure

Crystal-clear, easy to use, durable, safer than glass. Offer repeatable, accurate results. Individually calibrated to meet the accuracy requirements of ASTM E287. Unaffected by dilute mineral acids and bases except hydrofluoric acid and ammonium hydroxide. The pH range of 1-14 is ideal and up to 5% wt/wt of acids or 30% bases can be used. Burets not designed for exposure to alcohol and organic solvents. **Transparent**

Cat. No.3640	-0010	-0025	-0050	-0100
Cap., ml	10	25	50	100
Subdiv., ml	0.1	0.1	0.1	0.2
Reservoir, ml	500	500	1000	1000
I.D., in.	.37	.37	.42	.59
O.D., in.	.5	.5	.55	.73
No. per Pkg	1	1	1	1
No. per Case	4	4	4	4

*Or equivalent. Teflon is a registered trademark of DuPont.

3645 Self-Zeroing Buret Kit, 1000-ml low-density polyethylene bottle; four feet of clear NALGENE PVC plastic tubing; polypropylene fill-tube and adapter

Makes any plastic or glass 25- or 50-ml buret self-zeroing, economically and easily. Saves you money over costly glass self-zeroing burets. No more funneling; hazardous, wasteful spills are eliminated. Can be used with almost all aqueous titrants. Set adjustable fill-tube to zero mark on buret. Squeeze bottle to fill buret* just above zero mark. Release and excess liquid returns to bottle and titrant falls to the zero mark. To switch to a different size buret, simply reverse the adapter. Extra closure without tubing hole is included for storing titrants or carrying to the field.

Cat. No.3645	-2550
No. per Pkg	1
No. per Case	4

*Buret not included in kit.

3650 Transparent Burets, acrylic body; polymethylpentene tip; Teflon* TFE stopcock and plug

Crystal-clear; levels of colorless liquids are easily read. Durable. Individually calibrated to meet the accuracy requirements of ASTM E287. Stopcock is leakproof, with self-lubricating Teflon* TFE plug. Excellent for general use, schools, industrial labs and field use. Unaffected by dilute mineral acids and bases except hydrofluoric acid and ammonium hydroxide. The pH range of 1-14 is ideal and up to 5% wt/wt of acids or 30% bases can be used. Not designed for exposure to alcohol and organic solvents. **Transparent/Graduated**

Cat. No.3650	-0025	-0050	-0100
Cap., ml	25	50	100
Subdiv., ml	0.1	0.1	0.2
Limit of Error, ml	±0.06	±0.1	±0.2
I.D., mm	9.4	10.7	15.0
O.D., mm	12.7	14.1	18.5
No. per Pkg	1	1	1
No. per Case	4	4	4

*Or equivalent. Teflon is a registered trademark of DuPont.

Carboys

Find complete carboy specifications at the end of this section.

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

2250 Autoclavable Carboys with Handles, polypropylene; white polypropylene screw closure, TPE gasket

Popular round shape with handles and 83B closure, autoclavable PP. Excellent for large batches of culture media, distilled water and other solutions. Graduated in 1-gallon and 5-liter increments. Accepts No. 13-1/2 rubber stopper. NOTE: For best results, autoclave using a properly vented closure. See Sterilizing in the Reference section

Not recommended for use with hazardous materials. **Autoclavable/Graduated/Leakproof**

A

Cat. No.2250	-0020	-0050	-0130
Nom. Should. Cap., L	10	20	50
Nom. Should. Cap., gal.	2-1/2	5-1/2	13
Brim Cap., L (approx.)	12.5	24	55
No. per Pkg	1	1	1
No. per Case	6	4	1

*Refer to Bottles/information section for further information on leakproof testing.

2302 / DS2302 Carboys with Tubulation, low-density polyethylene; polypropylene screw closure

Serrated tubulation molded in one piece with Carboy, for strength and leak resistance. Outlet low on bottle for more complete drainage. Three largest sizes (Cat. No. 2302-0020, 2302-0050 and 2302-0130) have convenient wide shoulder handles for easy carrying. The sizes are also graduated* to deliver in 1-gallon and 5-liter increments. A hose clamp should be used when attaching tubing to ensure a tight fit and avoid leaking. Graduated/Leakproof

Cat. No.2302	-0001	-0005	-0010	-0020	-0050
Nom. Should. Cap., L	1	2	4	10	20
Nom. Should. Cap., gal.	32 oz.	1/2	1	2-1/2	5
Brim Cap., L (approx.)	1.1	2.1	4.2	12	22.5
Closure Size, mm	38-430	38-430	38-430	83B	83B
Tubing I.D., in.	1/4	1/4	1/4	1/2	1/2
No. per Case	6	6	6	6	4

Cat. No.DS2302	-0130
Nom. Should. Cap., L	50
Nom. Should. Cap., gal.	13
Brim Cap., L (approx.)	54
Closure Size, mm	83B
Tubing I.D., in.	5/8
No. per Case	1

*Cat. Nos. 2302-0001, 2302-0005 and 2302-0010 are not graduated.

Carboys

Find complete carboy specifications at the end of this section.

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

A

EARN

2319 Autoclavable Carboys with Spigot, polypropylene; polypropylene spigot and screw closure; TPE gasket

Use for storing and dispensing solutions, media. Ideal for sterile water storage – can be autoclaved before refilling to stop recurring algae or bacterial growth. Excellent chemical resistance. Closure size is 83B. Graduated to deliver in 1-gallon and 5-liter increments. Spigot boss molded in one piece with carboy, for strength and leak resistance. Spigot closure (Cat. No. 6423-0010) included. NOTE: Remove and disassemble spigot before autoclaving. See Sterilizing in the Reference section.

Autoclavable/Graduated/Leakproof

Cat. No.2319	-0020	-0050	-0130
Nom. Should. Cap., L	10	20	50
Nom. Should. Cap., gal.	2-1/2	5-1/2	13
Brim Cap., L (approx.)	12	22.5	54
No. per Pkg	1	1	1
No. per Case	6	4	1

For dimensions, refer to carboy specifications chart. Separate charts are avaiable for bottles and jars.

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2301 Autoclavable Carboys with Tubulation, polypropylene; polypropylene screw closure; TPE gasket

Serrated tubulation molded in one piece with carboy, for strength and leak resistance. Outlet low on carboy for more complete drainage. Convenient wide shoulder handles for easy carrying. Are also graduated to deliver in 1-gal. and 5-L increments. 10- and 20-liter sizes accepts 1/2-in. (13mm) I.D. tubing. A hose clamp should be used when attaching tubing to ensure a tight fit and avoid leaking. NOTE: For best results, autoclave using a properly vented closure. See Sterilizing in the reference section. **Autoclavable/Graduated/Leakproof**

Cat. No.2301	-0020	-0050
Nom. Should. Cap., L	10	20
Nom. Should. Cap., gal.	2.5	5.5
Brim Cap., L (approx.)	12	22.5
Closure Size, mm	83B*	83B*
No. per Case	6	4

*Also take No. 13-1/2 stopper

A

2226 Heavy Duty Vacuum Carboys, polypropylene white; polypropylene closure TPE gasket

Thicker walls give these polypropylene carboys added strength. Choose these carboys when service conditions are most extreme. Useful as vacuum trap, will hold full vacuum up to 8 hours. For convenience, use with 2158 series Quick Filling/Venting Closure in vacuum applications. Supplied with 83B closure with TPE gasket. NOTE: For best results, autoclave using a properly vented closure. See Sterilizing in the Reference section. **Autoclavable/Leakproof**

Cat. No.2226	-0020	-0050
Nom. Should. Cap., L	10	20
Nom. Should. Cap., gal.	2-1/2	5-1/2
Brim Cap., L (approx.)	12	24
No. per Pkg	1	1
No. per Case	6	4

Also see catalog number 2162 for additional vacuum fittings.

2235 Autoclavable Wide-Mouth Carboys with Handles, polypropylene; white polypropylene screw closure

Convenient wide-mouth opening and wide shoulder handles. Graduated to contain in 1-gallon and 5-liter increments. Closure size is 100 mm. Ideal for microbiological analysis, especially when handling large volumes of powders or other solid samples. Originally designed for composite sampling of foodstuffs for Salmonella testing. NOTE: For best results, autoclave using a properly vented closure. See Sterilizing in the Reference section. **Autoclavable/Graduated/Leakproof**

A

Cat. No.2235	-0020	-0050
Nom. Should. Cap., L	10	20
Nom. Should. Cap., gal.	2-1/2	5-1/2
Brim Cap., L (approx.)	12	23
No. per Pkg	1	1
No. per Case	6	4

Refer to Bottles/information section for further information on leakproof testing

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2221 Jugs, polypropylene; polypropylene screw closure

Large carrying handle allows use of rubber gloves for safe handling of corrosive liquids. Offset pour spout for easy, accurate pouring. Excellent chemical resistance. NOTE: For the best results, autoclave using a properly vented closure. See Sterilizing in the Reference section. **Autoclavable/Leakproof**

A

Cat. No.2221	-0010	-0020
Nom. Cap., L	4	8
Nom. Cap., Gal.	1	2
Closure Size, mm	38-430	53B (white)*
No. per Pkg	1	1
No. per Case	6	6

**with TPE gasket

2640 Autoclavable Carboys with Sanitary Flange, polypropylene, polypropylene closure

Standard NALGENE carboys with a 1-1/2-inch sanitary fitting welded in for use as a dispensing port. Fitting is located on side near bottom and provides a secure sanitary connection allowing the carboy to be used as a supply reservoir to a larger system such as a fermentor or chromatography column. Molded in autoclavable PP. All materials are non-cytotoxic and pass USP Class VI Biological Testing. 83B PP closure with TPE gasket. Not recommended for use with hazardous materials. Accept No. 13-1/2 rubber stopper. NOTE: For best results, autoclave using a properly vented closure. See Sterilizing in the Reference section. **USPVI/Autoclavable/Graduated/Leakproof**

A USP VI

Cat. No.2640	-0020	-0050	-0130
Nom. Should. Cap., L	10	20	50
Nom. Should. Cap., gal.	2-1/2	5-1/2	13
Brim Cap., L (approx.)	12.5	24	55
No. per Case	1	1	1

2630 Sanitary Carboys, polypropylene with 3-in. welded sanitary flange

Tri-Clover Flange is welded to standard NALGENE PP Carboy permitting aseptic fluid transfer or sampling. Easy to clean with no screw threads. Refer to Sanitary Fittings section for accessory options. NOTE: For best results, autoclave with a vented end cap mounted, but with the clamp only lightly engaged. Also available in Polycarbonate (Cat. No. 2261). **Autoclavable/Leakproof**

A

Cat. No.2630	-0010	-0020	-0050
Carboy Cap., L (nom.)	10	20	50
Flange Size, in.	3	3	3
No. per Case	1	1	1

Carboys

Find complete carboy specifications at the end of this section.

A

2261 Sanitary Carboy, polycarbonate

Clear, one-piece molded design can be used as receiver or dispensing vessel in pharmaceutical and biotechnology applications. To seal closure, use with heavy duty clamp (Cat. No. 2685-0300) and gasket (Cat. No. 2672-0300). Solid and ported sanitary end caps are also available. The 3-inch sanitary flange molded on the neck accepts standard flanged fittings. A clamping closure system seals securely and will not back off. The sanitary design is easier to clean than threaded containers or vessels.

Manufactured with the same resin, and molding techniques as NALGENE® PC Clearboys™ (Cat. Nos. DS2213, 2251, 2317) and PC bottles permits switching to Sanitary PC Carboys without material validation issues. Also available in polypropylene (Cat. No. 2630). Materials meet USP Class VI and FDA requirements. Many accessories available. **Autoclavable**

Cat. No.	Nom. Cap., L	Approx. Brim Cap., L	Nom. Weight, g	Finish	No. per Case
2261-0050	20	24	870	3-in.	4

A

2251 Clearboy™, Transparent Carboys, polycarbonate; white polypropylene screw closure; TPE gasket

Clearboys are transparent, durable, lighter and safer than glass. Autoclavable for sterile applications. Useful for large-volume media and culture preparation, especially where visual inspection of contents for quality is important. Ideal for refrigerated or frozen storage of aqueous solutions. Graduated in 1-gallon and 5-liter increments. Closure size is 83B (83 mm). NOTE: For best results, autoclave using a properly vented closure. See Sterilizing in the Reference section. **Autoclavable/L900/Transparent/Graduated/Leakproof**

Cat. No.2251	-0020	-0050
Nom. Should. Cap., L	10	20
Nom. Should. Cap., gal.	2-1/2	5-1/2
Brim Cap., L (approx.)	12.5	24
No. per Pkg	1	1
No. per Case	4	4

A

EARN

2317 Clearboy™ Transparent Carboys with Spigot, polycarbonate; polypropylene spigot and screw closure; TPE gasket

These tough, glass-clear, autoclavable carboys are ideal for dispensing sterile water, aqueous reagents and media. Use in cold rooms, even at subfreezing temperatures. Spigot boss molded in one piece with bottle, for strength and leak resistance. Spigot closure (Cat. No. 6423-0010) included. Graduated to deliver in 1-gallon and 5-liter increments. Closure size is 83B (83 mm). NOTE: Dismount and disassemble spigot before autoclaving. See Sterilizing in the Reference section.*

Autoclavable/Transparent/Graduated/Leakproof *Refer to Bottles/information for further information on leakproof testing.

Cat. No.2317	-0020	-0050
Nom. Should. Cap., L	10	20
Nom. Should. Cap., gal.	2-1/2	5-1/2
Brim Cap., L (approx.)	12	22.5
No. per Pkg	1	1
No. per Case	4	4

DS2127 Validation Bottles, polycarbonate, white polypropylene screw closure, TPE gasket

Manufactured with all the same materials and molding processes as NALGENE polycarbonate carboys. Allows convenient material compatibility validation for NALGENE polycarbonate carboys, particularly Cat. No. 2251-series and DS2213. Excellent for QA lot sample storage of high valued pharmaceuticals.
Autoclavable/Transparent

Cat. No.DS2127	-0030	-0250	-2000
Cap., ml	30	250	2000
Cap., oz.	1	8	64
Closure Size, mm	20-415	53B	53B
No. per Case	30	6	12

A

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

2210 Carboys with Handles, low-density polyethylene; white polypropylene screw closure

A good choice for storage and transport of reagents. Low density polyethylene (LDPE) resin is made using less catalyst than HDPE and is a better choice for reagents sensitive to the polymerization catalyst. Round, graduated to contain in 5 liter and 1 gallon increments. Wide shoulder handles allow easy carrying and pouring even with gloved hands. Comes with valve-sealing 83B closure accepts No. 13-1/2 rubber stopper. **Graduated/Leakproof**

Cat. No.2210	-0020	-0040	-0050	-0065	-0130
Nom. Shoulder Cap., L	10	15	20	25	50
Nom. Shoulder Cap., gal.	2-1/2	4	5-1/2	6-1/2	13
Brim Cap., L (approx.)	12.5	18	23	28	54
No. per Case	6	4	4	4	1

2318 Carboys with Spigot, low-density polyethylene; polypropylene spigot and screw closure

Suitable for collecting and dispensing distilled water, reagents, acids. Graduated to deliver in 1-gallon and 5-liter increments. Spigot boss molded in one piece with bottle, for strength and leak resistance. Spigot closure (Cat. No. 6423-0010) included. Four largest sizes (Cat. Nos. 2318-0020, 2318-0050, 2318-0065 and 2318-0130) have convenient wide shoulder handles. **Graduated/Leakproof**

Cat. No.2318	-0010*	-0020	-0050	-0065	-0130
Nom. Should. Cap., L	4	10	20	25	50
Nom. Should. Cap., gal.	1	2-1/2	5-1/2	6-1/2	13
Brim Cap., L (approx.)	4.1	12	22.5	27.5	54
Closure Size, mm	38-430	83B	83B	83B	83B
No. per Pkg	1	1	1	1	1
No. per Case	6	6	4	1	1

*Cat. No. 2318-0010 is not graduated.

Carboys

Find complete carboy specifications at the end of this section.

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

2097 Fluorinated Carboys, fluorinated high-density polyethylene; fluorinated white polypropylene screw closure

Safe, durable, cost-efficient line of narrow-mouth bottles and carboys feature fluorinated surfaces, (both inside and outside) for improved barrier properties and reduced solvent absorption. Fluorination enhances long-term container performance, prevents permeation loss and yields lower extractables. Split- and puncture-resistant. Heavy-duty wall construction. Features molded-in graduations. **Leakproof**

Cat. No.2097	-0020	-0050
Cap., L	10	20
Cap., gal.	2-1/2	5-1/2
Closure Size, mm	83B	83B
No. per Pkg	1	1
No. per Case	6	4

2303 Rectangular Carboys with Tubulation, high-density polyethylene; polypropylene screw closure

Rectangular shape for more efficient use of laboratory space. Molded-in graduations. Large neck opening (3-1/2-in., 8.89-cm) for easier filling and cleaning. Tubulation and bottle are one-piece molded. Built-in shoulder loops have sturdy, stainless steel handle attached. Tubulation accepts 1/2-in. (13mm) ID tubing. A hose clamp should be used when attaching tubing to ensure a tight fit and avoid leaking. Closure size is 100 mm. **Graduated/Leakproof**

Cat. No.2303	-0020	-0050
Nom. Cap., L	9	20
Nom. Cap., Gal.	2	5
Dim., mm	216 x 146 x 343	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x 13-1/2	12-1/2 x 8-5/8 x 15
No. per Pkg	1	1
No. per Case	6	4

For other dimensions, refer to Bottles, Carboys & Jars/Specifications chart.

2234 Wide-Mouth Carboys with Handles, low-density polyethylene; white polypropylene screw closure

Convenient wide-mouth opening for solids, powders, overhead mixers. Same material benefits as 2210 series carboys, 100mm closure. Graduated to contain in 1-gallon and 5-liter increments.
Graduated/Leakproof

Cat. No.2234	-0020	-0030	-0050
Nom. Should. Cap., L	10	15	20
Nom. Should. Cap., gal.	2-1/2	4	5-1/2
Brim Cap., L (approx.)	12	18	23
No. per Pkg	1	1	1
No. per Case	6	6	4

Refer to Bottles/information section for further information on leakproof testing

2220 Jugs, low-density polyethylene; polypropylene screw closure

Large carrying handle allows use with rubber gloves for safe handling of corrosive liquids. Offset pour spout for easy, accurate pouring. **Leakproof**

Cat. No.2220	-0010	-0020
Nom. Cap., L	4	8
Nom. Cap., Gal.	1	2
Closure Size, mm	38-430	53B (white)
No. per Pkg	1	1
No. per Case	6	6

See Bottles/Information section for information on leakproof testing

2340 Safety Dispensing Jugs, low-density polyethylene; white polypropylene screw closure

Wide shoulder handle for easy carrying. Integral, molded bottom grip gives additional support when pouring. Pour spout reduces splash; back off closure to vent. Spout plug permanently attached to jug. **Leakproof**

Cat. No.2340	-0020	-0050
Nom. Should. Cap., L	10	20
Nom. Should. Cap., gal.	2-1/2	5
Brim Cap., L (approx.)	12.5	22.5
Closure Size, mm	83B	83B
No. per Pkg	1	1
No. per Case	4	4

See Bottles/Information for information on leak testing.

2256 Amber Carboy, amber high-density polyethylene; amber polypropylene closure

Now with convenient wide shoulder handles. This opaque carboy meets the U.S. Pharmacopoeia Light Transmission Test (USP latest edition) requirements for storage of light-sensitive materials. It is excellent for storing and mixing photosensitive chemicals, reagents, buffers and standards. **Leakproof**

Cat. No.2256	-7020
Nom. Should. Cap., L	10
Nom. Should. Cap., gal.	2.5
Brim Cap., L (approx.)	12.5
Closure Size, mm	83B
No. per Pkg	1
No. per Case	6

2323 Lowboys™, high-density polyethylene; polypropylene spigot and screw closure

Low-profile design fits easily into tight spaces, on shelves or in refrigerators. Can be stacked three high. Convenient integral handgrip for safe, easy transport. Ideal for storing and dispensing reagents. Excellent chemical resistance, see chemical resistance chart. Closure size is 63 mm. Spigot closure (Cat. No. 6423-0010) included. **Leakproof**

Cat. No.2323	-0008	-0015
Cap., L	8	15
Cap., gal.	2	4
Approx. H x W x D, mm	165 x 368 x 305	203 x 368 x 368
Approx. H x W x D, in.	6-1/2 x 14-1/2 x 12	8 x 14-1/2 x 14-1/2
No. per Pkg	1	1
No. per Case	4	4

Refer to Reference section for further information on leakproof testing

Carboys

Find complete carboy specifications at the end of this section.

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

A

2324 Autoclavable Lowboys™, polypropylene; polypropylene spigot and screw closure

Low-profile design easily fits into tight spaces, on shelves or in refrigerators. Can be stacked three high. Good for storing and dispensing stock solutions. Autoclave between uses to eliminate bacterial contamination. Convenient integral handgrip for safe easy transport. Polypropylene offers excellent chemical resistance. Closure size is 63 mm. NOTE: Remove and disassemble spigot before autoclaving. See Sterilizing in the Reference section. **Autoclavable/Leakproof**

Cat. No.2324	-0008	-0015
Cap., L	8	15
Cap., gal.	2	4
Approx. H x W x D, mm	165 x 368 x 305	203 x 368 x 368
Approx. H x W x D, in.	6-1/2 x 14-1/2 x 12	8 x 14-1/2 x 14-1/2
No. per Pkg	1	1
No. per Case	4	4

Refer to Reference section for further information on leakproof testing

A

2212 Autoclavable Rectangular Carboys, polypropylene; polypropylene screw closure

Space-saving carboys molded in tough, translucent and autoclavable polypropylene. Ideal for storing solutions, and handling large volumes of powders and other solid samples. Large Neck opening (3-1/2-in., 8.89-cm) for easier filling and cleaning. Sturdy stainless steel handle attached to molded-in shoulder loops. Calibrated in liters and gallons. NOTE: For best results autoclave using a properly vented closure. **Autoclavable/Graduated/Leakproof**

Cat. No.2212	-0020	-0050
Nom. Cap., L	9	20
Nom. Cap., Gal.	2	5
Dim., mm	216 x 146 x 356	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x 14	12-1/2 x 8-5/8 x 15
No. per Pkg	1	1
No. per Case	6	4

Refer to Bottles/Information section for information on leakproof testing

A

2321 Autoclavable Rectangular Carboys with Spigot, polypropylene; polypropylene spigot and screw closure

Autoclavable carboy designed for dispensing solutions, media and sterile water. 3-1/2-inch (8.89-cm) neck opening for easy filling and cleaning. Sturdy stainless steel handle. Calibrated to deliver in liters and gallons. Spigot closure (Cat. No. 6423-0010) included. NOTE: Remove and disassemble spigot before autoclaving. See Sterilizing in the Reference section. **Autoclavable/Graduated/Leakproof**

Cat. No.2321	-0020	-0050
Nom. Cap., L	9	20
Nom. Cap., Gal.	2	5
Dim., mm	216 x 146 x 356	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x 14	12-1/2 x 8-5/8 x 15
No. per Pkg	1	1
No. per Case	6	4

Refer to Reference section for further information on leakproof testing

DS2213 Clearboy™, Clear, Rectangular Carboys, polycarbonate; polypropylene screw closure

Lightweight, glass-clear, extremely impact resistant. Ideal for collecting and storing solids and for use at extreme temperatures (see physical properties table in reference section). 3-1/2 inch (8.99-cm) neck opening for easy filling. Sturdy handle. Calibrated in liters and gallons. NOTE: For best results, autoclave using a properly vented closure. See Sterilizing in the Reference section.

Autoclavable/Transparent/Graduated/Leakproof

Cat. No.DS2213	-0020	-0050
Nom. Cap., L	9	20
Nom. Cap., Gal.	2	5
Dim., mm	216 x 146 x 362	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x 14-1/4	12-1/2 x 8-5/8 x 15
No. per Case	1	1

Refer to Bottles/information section for information on leakproof testing.

A

2322 Rectangular Carboys with Spigot, polycarbonate; polypropylene spigot and screw closure

Space-saving rectangular shape. All sizes feature molded-in graduations to deliver in liters and gallons. Polycarbonate is autoclavable, clear and has high impact strength; ideal for cold room use. Built-in shoulder loops have convenient stainless steel handle attached. Wide-mouth opening for easy filling, transferring, and cleaning. Closure size is 100 mm. Spigot closure (Cat. No. 6423-0010) included. NOTE: Remove and disassemble spigot before autoclaving. See Sterilizing in the Reference section.

Autoclavable/Transparent/Graduated/Leakproof

Cat. No.2322	-0020	-0050
Nom. Cap., L	9	20
Nom. Cap., Gal.	2	5
Dim., mm	216 x 146 x 362	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x 14-1/4	12-1/2 x 8-5/8 x 15
No. per Pkg	1	1
No. per Case	6	4

Refer to Reference section for further information on leakproof testing

A

2211 Rectangular Carboys, high-density polyethylene; polypropylene screw closures

Sturdy, space-saving design with molded-in graduations to deliver in liters and gallons. Built-in shoulder loops have convenient stainless steel handle attached. Wide-mouth opening for easy filling, transferring, cleaning. Closure size is 100 mm. **Graduated/Leakproof**

Cat. No.2211	-0020	-0050
Nom. Cap., L	9	20
Nom. Cap., Gal.	2	5
Dim., mm	216 x 146 x 343	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x 13-1/2	12-1/2 x 8-5/8 x 15
No. per Pkg	1	1
No. per Case	6	4

Refer to Reference section for further information on leakproof testing

Carboys

Find complete carboy specifications at the end of this section.

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

2320 Rectangular Carboys with Spigot, high-density polyethylene; polypropylene spigot and screw closure

Space-saving rectangular shape. Excellent chemical resistance, a good choice for storing and dispensing stock solutions. All sizes feature molded-in graduations. HDPE is tough, rigid, translucent. Built-in shoulder loops have sturdy stainless steel handles attached. Spigot closure (Cat. No. 6423-0010) included. **Graduated/Leakproof**

Cat. No.2320	-0020	-0050
Nom. Cap., L	9	20
Nom. Cap., Gal.	2	5
Dim., mm	216 x 146 x 356	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x14	12-1/2 x 8-5/8 x 15
No. per Pkg	1	1
No. per Case	6	4

Refer to Bottles/Information for information on leakproof testing

2214 Heavy Duty Rectangular Carboy, HDPE, high-density polyethylene; white polyethylene closure

An ideal choice for storage and transport of reagents. High density polyethylene (HDPE) carboy offers durability and chemical resistance. Integral handle provides ease in transport and pouring. Graduated to contain in 5 liter and 1 gallon increments. Convenient handle allow easy carrying and pouring even with gloved hands. Comes with valve-sealing 70mm closure. **Graduated/Leakproof**

Cat. No.2214	-0050
Nom. Should. Cap., L	20
Nom. Should. Cap., gal.	5
Approx. Brim Cap., L	20.8
Closure Size, mm	70
Min. Neck I.D., mm	48
Min. Neck I.D., in.	1-7/8
L x W x H, in.	12.1 x 9.2 x 15.7
L x W x H, mm	323 x 234 x 399
No. per Pkg	1
No. per Case	4

DS2327 Fluorinated Rectangular Carboys with Spigot, fluorinated high-density polyethylene; Tefzel* spigot; fluorinated white polypropylene screw closure

A carboy for storing and dispensing a variety of solvents. Space-saving rectangular shape. Tough, rigid, and translucent. Also useful for collecting and dispensing distilled water. Fluorinated surface (inside and outside) improves barrier properties and reduces solvent absorption. Fluorination enhances long-term container performance and prevents material loss due to permeation. Both sizes feature molded-in graduations to dispense in liters and gallons and attached stainless steel handle. **Graduated/Leakproof**

Cat. No.DS2327	-0020	-0050
Cap., L	9	20
Cap., gal.	2-1/3	5-1/4
Dim., mm	216 x 146 x 343	318 x 219 x 381
Dim., in.	8-1/2 x 5-3/4 x 13-1/2	12-1/2 x 8-5/8 x 15
No. per Case	1	1

*Tefzel is a registered trademark of DuPont.

2240 Jerricans, high-density polyethylene; white polypropylene screw closure

Heavy, rugged design – intended for hard use. Wide stance and low center of gravity for greater stability. Integral spout is long enough for accurate pouring. Strap-fastened closure cannot be lost. Graduations molded in liters and gallons. Recessed bottom provides second handgrip for pouring. **Graduated/Leakproof**

Cat. No.2240	-0015	-0025	-0050
L x W x H, mm	152 x 203 x 343	191 x 229 x 368	229 x 305 x 445
L x W x H, in.	6 x 8 x 13-1/2	7-1/2 x 9 x 14-1/2	9 x 12 x 17-1/2
Nom. Should. Cap., L	6	10	20
Nom. Should. Cap., gal.	1-1/2	2.5	5
Approx. Brim Cap., L	7.6	12	24
Approx. Brim Cap., gal.	1.9	3	6
Subdiv., gal.	1/4	1/4	1
Closure Size, mm	53B	53B	53B
No. per Pkg	1	1	1
No. per Case	6	6	4

For replacement parts, see Reference/Replacement Parts section

2242 Fluorinated Jerricans, fluorinated high-density polyethylene; fluorinated polypropylene closure

Durable and specially designed for hard use. A fluorocarbon surface (both inside and outside) provides improved barrier properties and reduces solvent absorption and penetration. Fluorination enhances long-term container performance and prevents permeation loss. Wide stance with low center of gravity provides greater stability. Long, integral spout allows easy pouring. Molded-in graduations (liters and gallons). Recessed bottom provides second handgrip for pouring. NALGENE fluorinated containers are useful with most acids, alkalies and aggressive organic solvents. **Graduated/Leakproof**

Cat. No.2242	-0025	-0050
L x W x H, mm	191 x 229 x 368	229 x 305 x 445
L x W x H, in.	7-1/2 x 9 x 14-1/2	9 x 12 x 17-1/2
Nom. Brim Cap., L	12	25
Nom. Brim Cap., gal.	3	6-1/2
Subdiv., L	2	4
Subdiv., gal.	1/2	1
Closure Size, mm	53B	53B
No. per Pkg	1	1
No. per Case	6	4

Carboys

2243 13L Jerricans, high density polyethylene with tethered polypropylene closures

Excellent choice for reagent storage. Heavy rugged design with good chemical resistance. Both Jerricans comply with FDA 21CFR 177.1520 and USP Class VI.

Cat. No. 2243-9013 offers two ports: pour spout with a tethered 53-mm closure and a second 38-mm port with closure behind the handle. Ideal as a reservoir in automated systems like the PRISM®* 3700 DNA Analyzer. The 53B closure can be plumbed with input/output tubing while the 38-mm closure is used for refilling or emptying the reservoir. The secondary port will also accept NNI Cat. No. DS2168-0384 septum closure for special aseptic applications.

Cat. No.2243	-0013	-9013
L x W x H, mm	290 x 189 x 378	290 x 189 x 378
L x W x H, in.	11.4 x 7.4 x 15	11.4 x 7.4 x 15
Nom. Shoulder Cap., L	13	13
Nom. Shoulder Cap., gal.	3.4	3.4
Closure Size, mm	53B	53B; 38-430
No. per Pkg	1	1
No. per Case	4	4

**PRISM is a registered trademark of Applied Biosystems

2241 Heavy-Duty Wide-Mouth Jug, high-density polyethylene; white polypropylene screw closure

Features the largest opening, 4 inches (120mm), in the NALGENE carboy line. Molded-in handle and recessed bottom allow easier filling and emptying without spills. Container is translucent and ideal for storing solids or powders. Wide stance and low center of gravity assure stability. Graduations molded in liters and gallons. Large neck allows easy cleaning, while space-saving rectangular shape permits efficient storage where space is limited. **Graduated**

Cat. No.2241	-0050
Nom. Should. Cap., L	20
Nom. Should. Cap., gal.	5
Approx. Brim Cap., L	24
Approx. Brim Cap., gal.	6
Closure Size, mm	120
Dim. L x W x H, mm	229 x 305 x 445
Dim. L x W x H, in.	9 x 12 x 17-1/2
No. per Pkg	1
No. per Case	4

STERILE

342289-0050 Sterile Single-Use Carboy, HDPE; PP closure

Innovative, single-use containers are safer than glass and excellent for storing sterile fluids and pharmaceutical/biotech products. No cleaning, no prep, no set-up costs. Materials meet the following requirements; CFR 21, 177.150, USP Class VI, non-cytotoxic. See Cat. No. 2229-0001 for optional stainless steel handle assembly. **Sterile/Leakproof**

Cat. No.	Nom. Cap., L	Approx. Brim Cap., L	Nom. Weight, g	Finish	No. per Case
342289-0050	20	23	870	83B	6

2229-0001 Handle for Single-Use Carboy, stainless steel handle

Cat. No.	Description	No. per Case
2229-0001	Stainless steel for 20L Single Use Carboys	1

Find complete carboy specifications at the end of this section.

3405, 3410, 3423 Sterile InVitro™ Biotainer® Carboys, light blue polycarbonate; silicone lined polypropylene closure

Sterile, ready-to-use carboys are molded in blue-tinted polycarbonate, providing safe storage from -100°C to 100°C. Closures feature a silicone liner. All sizes have molded-in graduations in mL. All have space-saving square shape. Meet USP 87, 88 and are tested for pyrogenicity. See bottle section for smaller sizes. **Sterile/Transparent/Leakproof/Graduated**

STERILE

Sterile

Cat. No.	Cap., ml	Cap., oz.	Closure Size, mm	No. per pkg	No. per Case
3405-42	5L	160	48	1	6
3405-06	5L	160	48	5	20
3405-16*	5L	160	48	6	6
3405-66*	5L	160	48	6	6
3410-42	10L	320	48	1	2
3410-08*	10L	320	48	1	2
3423-42	20L	640	48	1	3

**with polyethylene handle

Carboys

Nominal Capacity	Description	Catalog Number	Approx. Brim Cap., ml	Material	Color	Screw Closure Size, mm	Closure Cat. No.	I.D. Neck, mm/in.	Hgt. w/ Closure, mm/in.	Hgt. w/out Closure, mm/in.	O.D. Bottle, mm/in.
5 Liter (1 1/4 gal.)	Biotainer Carboy	3405-06	5,900	PC	Lt. Blue	48	—	38/1 1/2	299/11 25/32	290/11 5/8	166/6 9/16 Square
	Biotainer Carboy, w/Handle	3405-16	5,900	PC	Lt. Blue	48	—	38/1 1/2	299/11 25/32	290/11 5/8	166/6 9/16 Square
	Biotainer Carboy, w/Handle	3405-66	5,900	PC	Lt. Blue	48	—	38/1 1/2	299/11 25/32	290/11 5/8	166/6 9/16 Square
	Biotainer Carboy	3405-42	5,900	PC	Lt. Blue	48	—	38/1 1/2	299/11 25/32	290/11 5/8	166/6 9/16 Square
	Biotainer Carboy, w/Handle	3415-16	5,900	PETG	Clear	48	—	38/1 1/2	299/11 25/32	290/11 5/8	166/6 9/16 Square
	Biotainer Carboy	3415-42	5,900	PETG	Clear	48	—	38/1 1/2	299/11 25/32	290/11 5/8	166/6 9/16 Square
6 Liter (1 1/2 gal.)	Jerrican	2240-0015	7,900	HDPE	Natural	53B	71-2160-0530	36/1 7/16	335/13 7/32	328/12 7/8	176x213/6 5/16x8 3/8
8 Liter (2 gal.)	Bottle, NM	2202-0020	8,000	LDPE	Natural	53B	71-2160-0530	37/1 7/16	409/16 1/8	405/15 15/16	193/7 5/8
	Bottle, NM	2203-0020	8,100	PP	Natural	53B	71-2160-0530	37/1 7/16	409/16 1/8	405/15 15/16	193/7 5/8
	Bottle, Large, NM	2204-0020	8,000	PP	Amber	53B	71-2171-0530	37/1 7/16	409/16 1/8	405/15 15/16	193/7 5/8
	Bottle, Large, NM	DS2205-0020	9,000	PC	Clear	53B	71-2160-0530	37/1 7/16	409/16 1/8	405/15 15/16	193/7 5/8
	Jug, w/Handle	2220-0020	7,900	LDPE	Natural	53B	71-2160-0530	39/1 1/2	385/15 5/32	378/14 7/8	195/7 11/16
	Jug, w/Handle	2221-0020	8,000	PP	Natural	53B	71-2160-0530	39/1 1/2	385/15 5/32	378/14 7/8	195/7 11/16
	Lowboy	2323-0008	9,000	HDPE	Natural	63	71-2150-0630	44/1 3/4	159/6 1/4	156/6 1/8	305x366/12x14 3/8
	Lowboy, Autoclavable	2324-0008	9,000	PP	Natural	63	71-2150-0630	44/1 3/4	159/6 1/4	156/6 1/8	305x366/12x14 3/8
	Carboy, Rectangular, Fluorinated, w/Spigot	DS2327-0020	8,800	FLPE	Natural	100	71-2150-1000	89/3 1/2	358/14 1/8	351/13 13/16	216x147/8 1/2x5 3/16
9 Liter (2 1/4 gal.)	Carboy, Rectangular	2211-0020	9,100	HDPE	Natural	100	71-2150-1000	86/3 3/8	361/14 3/16	351/13 13/16	220x153/8 11/16x6 1/32
	Carboy, Rectangular	2212-0020	9,100	PP	Natural	100	71-2150-1000	86/3 3/8	361/14 3/16	351/13 13/16	220x153/8 11/16x6 1/32
	Carboy, Rectangular	DS2213-0020	9,100	PC	Clear	100	71-2150-1000	86/3 3/8	361/14 3/16	351/13 13/16	220x153/8 11/16x6 1/32
	Carboy, Rect., w/Tubulation	2303-0020	8,800	HDPE	Natural	100	71-2150-1000	86/3 3/8	361/14 3/16	351/13 13/16	220x153/8 11/16x6 1/32
	Carboy, Rect., w/Spigot	2320-0020	8,800	HDPE	Natural	100	71-2150-1000	86/3 3/8	361/14 3/16	351/13 13/16	220x153/8 11/16x6 1/32
	Carboy, Rect., w/Spigot	2321-0020	8,800	PP	Natural	100	71-2150-1000	86/3 3/8	361/14 3/16	351/13 13/16	220x153/8 11/16x6 1/32
	Carboy, Rect., w/Spigot	2322-0020	8,800	PC	Clear	100	71-2150-1000	86/3 3/8	361/14 3/16	351/13 13/16	220x153/8 11/16x6 1/32
10 Liter (2 1/2 gal.)	Carboy, Fluorinated, NM	2097-0020	12,500	FLPE	Natural	83B	—	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
	Carboy, NM, w/Handles	2210-0020	12,500	LDPE	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
	Carboy, Vacuum w/Handles	2226-0020	12,000	PP	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
	Carboy, WM, w/Handles	2234-0020	12,000	LDPE	Natural	100	71-2150-1000	88/3 1/2	343/13 1/2	338/13 5/16	250/9 7/8
	Carboy, WM, Autoclavable	2235-0020	12,000	PP	Natural	100	71-2150-1000	88/3 1/2	343/13 1/2	338/13 5/16	250/9 7/8
	Jerrican	2240-0025	12,000	HDPE	Natural	53B	71-2160-0530	38/1 1/2	376/14 13/16	368/14 1/2	246x199/9 11/16x7 13/16
	Jerrican, Fluorinated	2242-0025	12,000	FLPE	Natural	53B	—	37/1 1/2	376/14 13/16	368/14 1/2	246x199/9 11/16x7 13/16
	Carboy, Autoclavable, w/Handles	2250-0020	12,500	PP	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
	Carboy, Transparent	2251-0020	12,500	PC	Clear	83B	71-2160-0830	66/2 5/8	394/15 1/2	381/15	253/9 15/16
	Carboy, Amber	2256-0020	12,500	HDPE	Amber	83B	—	66/2 5/8	389/15 5/16	378/14 7/8	244/9 5/8
	Carboy, w/Tubulation	2301-0020	12,000	PP	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	379/14 13/16	245/9 5/8
	Carboy, w/Tubulation	2302-0020	12,000	LDPE	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	285/1 17/32
	Carboy, Transparent, w/Spigot	2317-0020	12,000	PC	Clear	83B	71-2160-0830	66/2 5/8	394/15 1/2	381/15	253/9 15/16
	Carboy, w/Spigot	2318-0020	12,000	LDPE	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
	Carboy, Autoclavable, w/Spigot	2319-0020	12,000	PP	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
	Jug, Safety Dispensing	2340-0020	12,000	LDPE	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
	Biotainer Carboy, Sterile	3410-42	13,600	PC	Lt. Blue	48	—	37/1 7/16	337/13 17/64	335/13 1/64	255/10 1/32 Square
	Biotainer Carboy, Sterile, w/Handle	3410-08	13,600	PC	Lt. Blue	48	—	37/1 7/16	337/13 17/64	335/13 1/64	255/10 1/32 Square
	Carboy, w/3" Welded Sanitary Flange	2630-0010	12,000	PP	Natural	—	—	73/2 7/8	353/13 7/8	353/13 7/8	250/9 7/8
	Carboy, w/Sanitary Flange	2640-0020	12,500	PP	Natural	83B	71-2160-0830	64/2 1/2	389/15 5/16	376/14 13/16	250/9 7/8
13 Liter	Jerrican, with Port	2243-0013	15,200	HDPE	Natural	53; 38-430	71-2160-0530	38/1.5	378/14.9	378/14.9	229x189/11.4x7.45
	Jerrican	2242-9013	15,200	HDPE	Natural	53	71-2160-0530	38/1.5	378/14.9	378/14.9	229x189/11.4x7.45
15 Liter (4 gal.)	Carboy, NM, w/Handles	2210-0040	18,000	LDPE	Natural	83B	71-2160-0830	64/2 1/2	429/16 7/8	419/16 1/2	285/1 17/32
	Carboy, WM, w/Handles	2234-0030	18,000	LDPE	Natural	100	71-2150-1000	88/3 1/2	389/15 5/16	379/14 7/8	286/11 1/4
	Lowboy	2323-0015	16,000	HDPE	Natural	63	71-2150-0630	44/1 3/4	210/8 1/4	206/8 1/8	371x371/14 5/8x14 5/8
	Lowboy, Autoclavable	2324-0015	15,500	PP	Natural	63	71-2150-0630	44/1 3/4	210/8 1/4	206/8 1/8	371x371/14 5/8x14 5/8
20 Liter (5 gal.)	Carboy, Fluorinated, NM	2097-0050	25,000	HDPE	Natural	83B	—	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, NM, w/Handles	2210-0050	23,000	LDPE	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, Rectangular	2211-0050	22,500	HDPE	Natural	100	71-2150-1000	86/3 3/8	399/15 11/16	389/15 5/16	229x320/9x12 5/8
	Carboy, Rectangular	2212-0050	22,500	PP	Natural	100	71-2150-1000	86/3 3/8	399/15 11/16	389/15 5/16	229x320/9x12 5/8
	Carboy, WM, Auto., w/Handles	2235-0050	23,000	PP	Natural	100	71-2150-1000	88/3 1/2	493/19 3/8	480/18 7/8	287/11 9/32

Nominal Capacity	Description	Catalog Number	Approx. Brim Cap., ml	Material	Color	Screw Closure Size, mm	Closure Cat. No.	I.D. Neck, mm/in.	Hgt. w/ Closure, mm/in.	Hgt. w/out Closure, mm/in.	O.D. Bottle, mm/in.
	Carboy, Rectangular	DS2213-0050	23,900	PC	Clear	100	71-2150-1000	86/3 3/8	399/15 11/16	389/15 5/16	229x320/9x12 5/8
	Carboy	2214-0050	20,800	HDPE	Natural	70	71-2151-0070	59/2 5/16	396/15 5/8	396/15 5/8	231x319/93/32x12 9/16
	Carboy, Vacuum w/Handles	2226-0050	24,000	PP	Natural	83B	71-2160-0830	64/2 1/2	533/21	521/20 1/2	284/11 3/16
	Jerrican	2240-0050	23,800	HDPE	Natural	53B	71-2160-0530	41/1 5/8	452/17 13/16	447/17 5/8	320x245/125/8x9 5/8
	Jug, Heavy-Duty, WM	2241-0050	24,000	HDPE	Natural	120	71-2155-1200	104/4 3/32	455/17 7/8	442/17 3/8	315x246/123/8x9 5/8
	Carboy, WM, w/Handles	2234-0050	23,000	LDPE	Natural	100	71-2150-1000	88/3 1/2	493/19 3/8	480/18 7/8	287/11 9/32
	Jerrican, Fluorinated	2242-0050	23,800	FLPE	Natural	53B	—	41/1 5/8	452/17 13/16	447/17 5/8	320x245/125/8x9 5/8
	Biotainer Carboy, Sterile	3423-42	23,900	PC	Lt. Blue	48	—	37/1 7/16	493/19 13/32	491/19 21/64	255/10 1/32 Square
	Carboy, Autoclavable, w/Handles	3423-42	24,000	PP	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, Transparent	2251-0050	24,000	PC	Clear	83B	71-2160-0830	66/2 5/8	536/21 3/32	528/20 13/16	290/11 3/8
	Carboy, Sanitary	2261-0050	22,500	PC	Transparent	3-in.Sanitary	N/A	68/237	498/19 5/8	328/12 15/16	250/9 13/16
	Carboy, w/Tubulation	2301-0050	22,500	PP	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	281/11 3/32
	Carboy, w/Tubulation	2302-0050	22,800	LDPE	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, Rect., w/Tubulation	2303-0050	22,500	HDPE	Natural	100	71-2150-1000	86/3 3/8	399/15 11/16	389/15 5/16	229x320/9x12 5/8
20 Liter	Carboy, w/Spigot	2317-0050	22,500	PC	Clear	83B	71-2160-0830	66/2 5/8	536/21 3/32	528/20 13/16	290/11 3/8
(5 gal.)	Carboy, w/Spigot	2318-0050	22,500	LDPE	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, Autoclavable, w/Spigot	2319-0050	22,500	PP	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, Rect., w/Spigot	2320-0050	22,500	HDPE	Natural	100	71-2150-1000	86/3 3/8	399/15 11/16	389/15 5/16	229x320/9x12 5/8
	Carboy, Rectangular	2321-0050	22,500	PP	Natural	100	71-2150-1000	86/3 3/8	399/15 11/16	389/15 5/16	229x320/9x12 5/8
	Carboy, Rect., w/Spigot	2322-0050	22,500	PC	Clear	100	71-2150-1000	86/3 3/8	399/15 11/16	389/15 5/16	229x320/9x12 5/8
	Carboy, Rect., Fluorinated, w/Spigot	2327-0050	22,500	FLPE	Natural	100	71-2150-1000	89/3 1/2	384/15 1/8	379/14 5/16	229x320/9x12 5/8
	Jug, Safety Dispensing	2340-0050	22,500	LDPE	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, w/3" Welded Sanitary Flange	2630-0020	22,500	PP	Natural	3-in. Sanitary	—	73/2 1/8	495/19 1/2	495/19 1/2	286/11 1/4
	Carboy, w/Sanitary Flange	2640-0050	24,000	PP	Natural	83B	71-2160-0830	64/2 1/2	528/20 13/16	518/20 3/8	286/11 1/4
	Carboy, Single-Use Sterile	342289-0050	23,000	HDPE	Natural	83	71-2160-0830	64/2 1/2	502/19 11/16	495/19 13/32	285/11 1/4
	Carboy, NM, w/Handles	2210-0065	28,000	LDPE	Natural	83B	71-2160-0830	64/2 1/2	594/23 3/8	584/23	287/11 9/32
25 Liter	Carboy, w/Tubulation	DS2302-0065	27,500	LDPE	Natural	83B	71-2160-0830	64/2 1/2	594/23 3/8	584/23	287/11 9/32
	Carboy, w/Spigot	2318-0065	27,500	LDPE	Natural	83B	71-2160-0830	64/2 1/2	594/23 3/8	584/23	287/11 9/32
	Carboy, NM, w/Handles	2210-0130	54,000	LDPE	Natural	83B	71-2160-0830	64/2 1/2	678/26 11/16	668/26 5/16	379/14 15/16
50 Liter	Carboy, Autoclavable, w/Handles	2250-0130	55,000	PP	Natural	83B	71-2160-0830	64/2 1/2	678/26 11/16	668/26 5/16	379/14 15/16
(13 gal.)	Carboy, w/Tubulation	DS2302-0130	55,600	LDPE	Natural	83B	71-2160-0830	64/2 1/2	678/26 11/16	668/26 5/16	379/14 15/16
	Carboy, w/Spigot	2318-0130	53,500	LDPE	Natural	83B	71-2160-0830	64/2 1/2	678/26 11/16	668/26 5/16	379/14 15/16
	Carboy, Autoclavable, w/Spigot	2319-0130	53,500	PP	Natural	83B	71-2160-0830	64/2 1/2	678/26 11/16	668/26 5/16	379/14 15/16
	Carboy, w/3" Welded Sanitary Flange	2630-0050	55,000	PP	Natural	3-in. Sanitary	—	73/2 7/8	645/25 3/8	645/25 3/8	379/14 15/16
	Carboy, w/Sanitary Flange	2640-0130	55,000	PP	Natural	83B	71-2160-0830	64/2 1/2	678/26 11/16	668/26 5/16	379/14 15/16

For containers greater than 50 liters, see "Tanks" or "Bioprocess/Culture Ware."

*No. 11-1/2 Rubber Stopper. Other helpful information molded into most NALGENE products includes our flask insignia, NALGENE trademark and, where appropriate, the size in ounces, milliliters or both.

Carriers

6501 Safety Bottle Carriers, low-density polyethylene; polycarbonate cap; epoxy-coated handle

Redesigned to accommodate 2.5-L (5-pt.) acid bottles and standard 4-L (1-gal.) chemical bottles. Bottles with finger loops fit easily, too. Cover locks in place with epoxy-coated handle while carrying. Clear plastic cap protects bottle closure and allows identification of color-coded closure on acid bottles. Cap twists for removal from cover. No need to remove bottle from carrier before pouring. Cat. No. 6501-4000 has a larger diameter that fits coated glass bottles.

Cat. No.6501	-2500	-4000
Accomodates Bottle Capacity	2.5 L; 5 pt.	4 L; 1 gal
No. per Pkg	1	1
No. per Case	6	6

6505 Safety Half-Liter Bottle Carrier, linear low-density polyethylene

Easily and safely holds up to six standard half-liter reagent bottles in any profile. Also useful for carrying most other half-liter glass or plastic bottles. Bottles are held securely; reduces possibility they may bump into each other, crack or chip. Has a sturdy, wide handle molded in one piece with the base, which allows a comfortable grip, even when carrier is full. Snug-fitting cover latches securely to base. Carriers may be stacked.

Cat. No.6505	-0010
L x W x H, mm (nom.)	349 x 248 x 276
L x W x H, in. (nom.)	14 x 10 x 11
No. per Pkg	1
No. per Case	6

A

DS5996 Multi-Bottle Rack, white polycarbonate

Holds up to eight filled round or square bottles, such as 500-ml round NALGENE bottles, 500-ml NALGENE square bottles, and 500-ml NALGENE wash bottles. Also used as BOD Bottle Rack. Handle telescopes for convenient storage. **Autoclavable**

Cat. No.DS5996	-0871
No. of Bottles Held	8
No. per Case	1

A

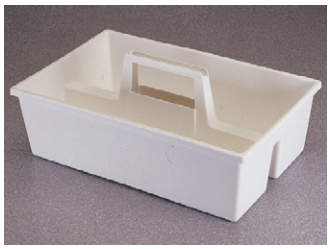
DS5995 Dilution Bottle Rack, white polycarbonate

Strong, durable rack securely holds 12 NALGENE dilution bottles (Cat. Nos. 2500 and 2505) or similar glass dilution bottles without the need for pans or carts. Bottles fit snugly between upper grid and molded-in depressions on lower tray. Handle telescopes into rack for convenient storage. **Autoclavable**

Cat. No.DS5995	-1245
No. of Bottles Held	12
No. per Case	1

7130 Utility Carrier, high-density polyethylene

Rigid utility carrier features sturdy handle for comfort and balance during transport, Molded in center division. Useful for storage and carrying a multitude of lab items.



Cat. No.7130	-0010
Overall Dim. (incl. Handle), L x W x H, mm	378 x 241 x 114
Overall Dim. (incl. Handle), L x W x H, in.	14-7/8 x 9-1/2 x 4-1/2
Compartment Dim., L x W x H, mm	340 x 89 x 111
Compartment Dim., L x W x H, in.	13-3/8 x 3-1/2 x 4-3/8
No. per Pkg	1
No. per Case	6

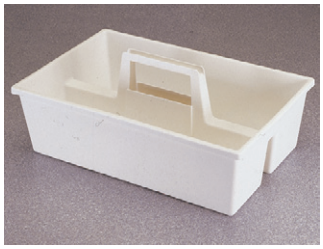
7131 Laboratory Carrier, high-density polyethylene

Reduces breakage and spillage when transporting glass and plastic bottles. Two foam inserts with six holes (consisting of removable circular sleeves) keep bottles separated. Remove concentric foam sleeves to accommodate up to six bottles with 2-3/8-in. (60-mm), 3-1/2-in. (89-mm) and 4-1/4-in. (108-mm) diameters. Accommodates NALGENE 250- and 1000-ml round bottles, disposable filter units, and reusable filter holders, 100-, 500- and 1000-ml glass media bottles. Sturdy enough to hold six full 1000-ml glass media bottles. Carrier will not crack or shatter.

Cat. No.7131	-0001
L x W x H (with handle), mm	381 x 356 x 267
L x W x H (with handle), in.	15 x 14 x 10-1/2
No. per Pkg	1
No. per Case	2

7134 Autoclavable Utility Carrier, polypropylene

Molded-in center division. Useful for carrying a multitude of items. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. **Autoclavable/Biohazard**



Cat. No.7134	-0010
Overall Dim., L x W x H, mm	378 x 241 x 114
Overall Dim., L x W x H, in.	14-7/8 x 9-1/2 x 4-1/2
Compartment Dim., L x W x H, mm	340 x 89 x 111
Compartment Dim., L x W x H, in.	13-3/8 x 3-1/2 x 4-3/8
No. per Pkg	1
No. per Case	6

7155 Collapsible Carrier, white polypropylene, stainless steel

A convenient way to transport labware without wasting storage space. Lightweight and durable. With molded-in handgrips.

Cat. No.7155	-1421
L x W x H (open), mm	527 x 349 x 273
L x W x H (open), in.	20-3/4 x 13-3/4 x 10-3/4
L x W x H (folded), mm	527 x 349 x 70
L x W x H (folded), in.	20-3/4 x 13-3/4 x 2-3/4
No. per Pkg	1
No. per Case	4

WARNING! Do not use with radioisotopes. Use NALGENE beta-radiation shields when working with beta-radioisotopes.

7135 Bio Transport Carrier, polycarbonate; silicone gasket, polycarbonate clamps

Closed-system carrier designed to protect the lab worker during transportation of Unwire test tube racks* containing tubes or sample holders filled with potentially hazardous samples. Tough and break-resistant. Offers excellent visibility of contents. Easy-to-grasp side handles are molded in. Clamps securely hold carrier closed and assure leakproof seal. For routine sterilization, autoclave with the cover off. To avoid exposure to biohazardous material in the event of accidental spills within carrier, autoclave and dispose of carrier and contents without opening clamps. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. Optional stainless steel handle available (Cat. No. 7136-0001). **Autoclavable/Biohazard/Transparent/Leakproof**

*Accommodates all sizes of Unwire test tube racks, Cat. Nos. 5970, 5971, 5972, 5973 and 5976.

Cat. No.7135	-0001
L x W x H, mm	68 x 184 x 171
L x W x H, in.	14-1/2 x 7-1/4 x 6-3/4
No. per Pkg	1
No. per Case	4

7136 Bio Transport Carrier Handle, stainless steel

Fits Bio Transport Carrier (Cat. No. 7135-0001) for easy one-handed carrying and manipulation. Easy to put on and take off. Securely holds a fully loaded Bio Transport Carrier. Folds to side for storage. Will not rust. **Autoclavable/Biohazard**

Cat. No.7136	-0001
No. per Pkg	1
No. per Case	8

6565 NALGENE® 4-in-1 EZ Tote™, corrugated plastic

Patent pending design makes transporting bottles and other lab essentials safer and easier. NALGENE 4-in-1 EZ Tote is versatile, durable and lightweight. Pre-assembled partitions are included and assembly instructions are printed on each tote. Recommended for temperatures from refrigerator to room temperature. Do not autoclave.

- Versatile tote carries 8 x 500 mL, 6 x 1L or 2 x 4L bottles
- Holds up to 28 pounds / 12.7 kg
- Easy to assemble and stores flat
- Strong, lightweight, durable corrugated plastic

Cat. No.6565	-0001
L x W x H, in. (nom.)	13 x 8 x 13-1/2
L x W x H, mm (nom.)	330 x 203 x 343
Color	Blue
No. per Case	4

Centrifuge Ware

NALGENE Centrifuge Tubes and FiberLite Carbon Fiber Rotors - A Perfect Fit.

FIBERLite®
Piramoon Technologies, Inc.®

NALGENE® Brand Centrifuge Ware offers a wide selection of centrifuge tubes, bottles, closures and adapters in many different sizes and resin types to fit your assay requirements. Molded from advanced bioanalytical-grade resins, their high purity means low extractables and leaching in your application. It's easy to find the right size, style and product support you need, just visit www.NALGENElabware.com for our chemical resistance and rotor matching guides.

NALGENE Conical and Round Bottom tubes are available in PMP, PPCO, PC, and TEFZEL ETFE resins designed to fit your application's need for mechanical strength, autoclavability, temperature, and/or chemical resistance. The conical tubes have easy-to-read molded-in gradations. The round tubes are available in lipped and nonlipped that feature uniform wall thickness for greater strength and usability.

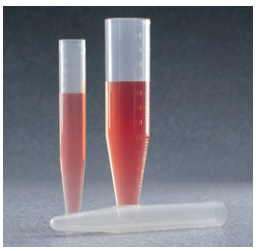
In conformance with industry nomenclature, NALGENE Centrifuge Tubes and Bottles use "nominal capacity" to express dimensional not volumetric tube and bottle sizes. For lipped centrifuge tubes that do not accomodate a leakproof closure, the nominal capacity and the volume capacity are equivalent.
Centrifuge tubes and bottles that are threaded to provide a leakproof closure are manufactured to express dimensional rotor requirements. Maintaining the dimensional rotor requirements results in a loss of total volume. Brim capacities are noted in the product description where the loss in volume is > 10%.

NALGENE Oak Ridge Centrifuge products are available in PPCO, PC, PS and Teflon FEP resins with linerless, non-contaminating closures for unsurpassed leakproof performance in today's demanding applications.

NALGENE Centrifuge Bottles are available with round or conical bottoms, in a full range of sizes from 250mL to 2L, in PPCO, PC, Teflon FEP, and HDPE resins, so whether it's cell culture harvesting, protein biochemistry or phenol extractions it's simple to find the right bottle! Closures and adapters are available separately.

NALGENE labware is for research use only, not intended for *In Vitro* diagnosis or parenterals.

WARNING! All centrifuge ware must be filled to at least 80% of total capacity for proper performance unless otherwise noted.

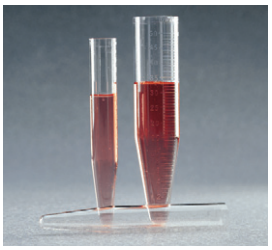


A

3103 Conical-Bottom Centrifuge Tubes, polypropylene copolymer

Translucent PPCO has excellent chemical resistance. Molded-in graduations. For low-speed centrifugation up to 6,000 x g. Supplied without closure. Friction fit closures available; for 15 mL use DS3111-0017 and 50 mL use DS3111-0029. For proper performance must be filled to at least 80% of the total capacity. **Autoclavable/Graduated**

Cat. No.3103	-0015	-0050
Nom. Cap., ml	15	50
No. per Pkg	10	10
No. per Case	100	100



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3105 Conical-Bottom Centrifuge Tubes, polycarbonate

Polycarbonate open-top tubes have outstanding mechanical strength. Excellent for whole cell separations. For use up to 6,000 x g in refrigerated or non-refrigerated centrifuges. Molded-in graduations. Supplied without closure. Friction fit closures available; for 15 mL use DS3111-0017 and 50 mL use DS3111-0029. For proper performance must be filled to at least 80% of the total capacity.
Autoclavable/Transparent/Graduated

Cat. No.3105	-0015	-0050
Nom. Cap., ml	15	50
No. per Pkg	10	10
No. per Case	100	100

A

3110 Round-Bottom Centrifuge Tubes, polypropylene copolymer

Translucent open-top tubes have excellent chemical resistance. Uniform wall thickness and diameter provides improved rotor fit and performance. For use up to 50,000 x g in refrigerated or non-refrigerated centrifuges. Supplied without closure. See Centrifuge Tube and Friction Fit Closure Guide fo more information. Cat. No. is 3110-1000 is lipped; 50-ml size available lipped (Cat. No. 3110-9500) or non-lipped (Cat. No. 3110-0500). Must be filled to at least 80% of the total capacity for proper performance. Two largest sizes are lipped. **Autoclavable**

Cat. No.3110	-0120	-0150	-0160	-0380	-0500	-9500*	-1000*
Nom. Cap., ml	12	15	16	38	50	50	100
No. per Pkg	10	10	10	10	10	10	10
No. per Case	100	100	100	100	100	100	40

*Lipped

DS3112 Round-Bottom Centrifuge Tube, low-density polyethylene

Translucent open-top tubes are ideal for use in refrigerated centrifuges up to 10,000 x g (at 4°C) and non-refrigerated use to 7,000 x g. Supplied without closure. Lipped for handling ease. At high speeds, this lipped tube should ALWAYS be filled to at least 80% of total capacity and ALWAYS be used with NALGENE friction-fit closure (Cat. No. DS3111-0029).

Cat. No.DS3112	-0050*
Nom. Cap., ml	50
No. per Case	10

*Lipped

3117 Round-Bottom Centrifuge Tubes, polycarbonate

These open-top tubes are stronger than polypropylene. Can be used up to 50,000 x g in refrigerated or non-refrigerated centrifuges. Supplied without closure. See Centrifuge Tube and Friction Fit Closure Guide for more information. Cat. No. 3117-1000 is lipped; 50-ml size available lipped (Cat. No. 3117-9500) or non-lipped (Cat. No. 3117-0500). Must be filled to at least 80% of the total capacity for proper performance. **Autoclavable/Transparent**

Cat. No.3117	-0120	-0150	-0160	-0380	-0500	-9500*	-1000*
Nom. Cap., ml	12	15	16	38	50	50	100
No. per Pkg	10	10	10	10	10	10	10
No. per Case	100	100	100	100	100	100	40

*Lipped

IMPORTANT! NALGENE® Oak Ridge centrifuge tubes are supplied with a linerless, non-contaminating screw closure. Those items described as leakproof will not leak during ordinary use. To assure leakproof service, especially at speeds greater than 10,000 x g or when spinning hazardous materials, NALGENE sealing cap assemblies (Cat. No. DS3131 and DS3132) are recommended. See individual listings.

3114 Oak Ridge Centrifuge Tubes, Teflon* FEP; Tefzel* ETFE screw closure

Ideal for high-speed centrifugation of aggressive chemicals. Excellent for chloroform and phenol extractions. Resist any acid, base or solvent. Autoclavable tubes withstand temperatures from -100°C to +150°C. For use in refrigerated and non-refrigerated centrifuges up to 50,000 x g. NALGENE sealing cap assemblies (Cat. No. DS3131) are available. Before autoclaving, just set closure on top of the tube without engaging the threads. **NOTE: For proper performance must be filled to 100% of the total capacity.** **Autoclavable/Biohazard/Leakproof/Teflon FEP**

*Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

Cat. No.3114	-0010***	-0030	-0050**
Nom. Cap., ml	10	30	50
No. per Pkg	2	2	2
No. per Case	10	10	10

**Actual brim capacity of 3114-0050 is 46 ml.

***Sealing cap assembly not available for 3114-0010.

3115 Oak Ridge Centrifuge Tubes, polysulfone; polypropylene screw closure

Strong and tough like polycarbonate but much more acid- and base-resistant. Can be used up to 50,000 x g in refrigerated or non-refrigerated centrifuges. NALGENE sealing caps* (Cat. No. DS3132) are available. Before autoclaving, just set closure on top of the tube without engaging the threads. Must be filled to at least 80% of the total capacity. **Autoclavable/Biohazard/Transparent/Leakproof**

*Closure option: Order Cat No. 3137 Oak Ridge centrifuge tubes (polysulfone) with sealing cap or order sealing caps separately.

Cat. No.3115	-0010	-0030	-0050**
Nom. Cap., ml	10	30	50
No. per Pkg	10	10	10
No. per Case	100	100	100

**Actual brim capacity for 3115-0050 is 43 ml.

WARNING! All centrifuge ware must be filled to at least 80% of total capacity for proper performance unless otherwise noted.

IMPORTANT! NALGENE® Oak Ridge centrifuge tubes are supplied with a linerless, non-contaminating screw closure. Those items described as leakproof will not leak during ordinary use. To assure leakproof service, especially at speeds greater than 10,000 x g or when spinning hazardous materials, NALGENE sealing cap assemblies (Cat. No. DS3131 and DS3132) are recommended. See individual listings.

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3118 Oak Ridge Centrifuge Tubes, polycarbonate; polypropylene screw closure

Withstand up to 50,000 x g in refrigerated or non-refrigerated centrifuges. NALGENE sealing caps* are available (Cat. No. DS3132) for 28-, 30-, and 50-ml sizes (Cat. Nos. 3118-0028, 3118-0030 and 3118-0050). Before autoclaving, just set closure on top of the tube without engaging the threads. Must be filled to 80% of the total capacity. Refer to NALGENE Tube and Bottle Selector guide for complete speed, closure and accessory information. **Autoclavable/Biohazard/Transparent/Leakproof**

*Closure option: Order Cat. No. 3138 Oak Ridge centrifuge tubes (polycarbonate) with sealing cap, or order sealing caps separately.

Cat. No.3118	-0010***	-0028	-0030	-0050	-0085
Nom. Cap., ml	10	28	30	50**	85**
No. per Pkg	10	10	10	10	10
No. per Case	100	100	100	100	100

**Actual brim capacities for Cat. No. 3118-0050 is 43 ml and Cat. No. 3118-0085 is 81 ml.

***Sealing cap assembly not available for 3118-0010.

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3119 Oak Ridge Centrifuge Tubes, polypropylene copolymer; polypropylene screw closure

Translucent polypropylene copolymer provides greater chemical resistance than polycarbonate and can be autoclaved repeatedly. Contact-clear tubes allow easy view of contents. Can be used up to 50,000 x g in refrigerated and non-refrigerated centrifuges. NALGENE sealing caps* (Cat. No. DS3132) are available. Before autoclaving, just set closure on top of the tube without engaging the threads. Must be filled to at least 80% of the total capacity. Refer to NALGENE Tube and Bottle Selector guide for complete speed, closure and accessory information. **Autoclavable/Biohazard/Leakproof**

*Closure option: Order Cat. No. 3139 Oak Ridge tubes (polypropylene copolymer) with sealing cap, or order sealing caps separately.

Cat. No.3119	-0010	-0028	-0030	-0050
Nom. Cap., ml	10	28	30	50**
No. per Pkg	10	10	10	10
No. per Case	100	100	100	100

**Actual brim capacity of 3119-0050 is 42 ml.

3137 Oak Ridge Centrifuge Tubes with Sealing Cap, polysulfone; polypropylene screw closure; silicone gasket

Strong and tough like polycarbonate but much more acid- and base-resistant. Can be used up to 50,000 x g in refrigerated and non-refrigerated centrifuges. Must be filled to at least 80% of the total capacity. With sealing cap closure option. Before autoclaving, just set closure on top of the tube without engaging the threads. **Autoclavable/Biohazard/Transparent/Leakproof**

Cat. No.3137	-0030	-0050
Nom. Cap., ml	30	50
No. per Pkg	10	10
No. per Case	50	50

3138 Oak Ridge Centrifuge Tubes with Sealing Cap, polycarbonate; polypropylene screw closure; silicone gasket

Withstand up to 50,000 x g in refrigerated or non-refrigerated centrifuges. With sealing cap closure option. Before autoclaving, just set closure on top of the tube without engaging the threads. Must be filled to at least 80% of the total capacity for proper performance. **Autoclavable/Biohazard/Transparent/Leakproof**

Cat. No.3138	-0010	-0016	-0030	-0050
Nom. Cap., ml	10	16	30	50
No. per Pkg	10	10	10	10
No. per Case	50	50	50	50

3139 Oak Ridge Centrifuge Tubes with Sealing Cap, polypropylene copolymer; polypropylene screw closure; silicone gasket

Polypropylene copolymer provides greater chemical resistance than polycarbonate and can be autoclaved repeatedly. Contact-clear tubes allow easy view of contents. Can be used up to 50,000 x g in refrigerated or non-refrigerated centrifuges with sealing cap closure option. Before autoclaving, just set closure on top of the tube without engaging the threads. Must be filled to at least 80% of the total capacity for proper performance. **Autoclavable/Biohazard/Leakproof**

Cat. No.3139	-0010	-0016	-0030	-0050
Nom. Cap., ml	10	16	30	50
No. per Pkg	10	10	10	10
No. per Case	50	50	50	50

3146 Conical Oak Ridge Centrifuge Tube, polycarbonate; polypropylene screw closure

These conical centrifuge tubes combine the better separation/pelleting capabilities of a conical tube with the superior sealing capability of Oak Ridge tubes. Graduations are silkscreened from 5 to 35 ml in 1-ml increments. Accommodate NALGENE sealing caps (Cat. No. DS3132-0024) and require conical tube adapter (Cat. No. DS3147-0050). Before autoclaving, just set closure on top of the tube without engaging the threads. Must be filled to at least 80% of the total capacity for proper performance.
Autoclavable/Biohazard/Transparent/Graduated/Leakproof

Cat. No.3146	-0050
Nom. Cap., ml	35
No. per Pkg	10
No. per Case	100

WARNING! All centrifuge ware must be filled to at least 80% of total capacity for proper performance unless otherwise noted.

IMPORTANT! NALGENE® Oak Ridge centrifuge tubes are supplied with a linerless, non-contaminating screw closure. Those items described as leakproof will not leak during ordinary use. To assure leakproof service, especially at speeds greater than 10,000 x g or when spinning hazardous materials, NALGENE sealing cap assemblies (Cat. No. DS3131 and DS3132) are recommended. See individual listings.

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3148 Conical Oak Ridge Centrifuge Tube, polypropylene copolymer; polypropylene screw closure

These conical centrifuge tubes combine the better separation/pelleting capabilities of a conical tube with the superior sealing capabilities of Oak Ridge tubes. Graduations silkscreened from 5 to 35 ml in 1-ml increments. Accommodate NALGENE sealing caps (Cat. No. DS3132-0024) and require conical-tube adapter (Cat. No. DS3147-0050). Molded of PPCO for better chemical resistance. Tubes are translucent but contact clear for easy liquid viewing. Before autoclaving, just set closure on top of tubes without engaging the threads. Must be filled to at least 80% of the total capacity for proper performance. **Autoclavable/Biohazard/Leakproof**

Cat. No.3148	-0050
Nom. Cap., ml	35
No. per Pkg	10
No. per Case	100

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3120 Centrifuge Bottles, polypropylene copolymer; polypropylene screw closure

Translucent bottles have excellent chemical resistance. Strong and rigid. Sealing cap (Cat. No. DS3132-0063) available for 1000-ml capacity bottles (Cat. No. 3120-1000 and 3120-1010). When using the 250-ml bottle (Cat. No. 3120-0250) in the Sorvall GSA rotor, use the NALGENE centrifuge bottle adapter (Cat. No. DS3125-0250). Cat. No. 3120-0500 is designed for use with IEC rotors. Before autoclaving, set closure on top of the bottle without engaging the threads. For proper performance these bottles must be filled to at least 80% of the total capacity, except for Cat. No. 3120-9500, which must NOT be filled to more than 75% of total capacity. Refer to NALGENE Tube and Bottle Selector Guide for complete speed, closure and accessory information. **Autoclavable**

Maximum ratings:

- 3120-0250 rated for 13,200 x g (Up to 27,500 x g with sealing cap assembly)*
- 3120-0500 rated for 4,800 x g
- 3120-9500 rated for 4,800 x g**
- 3120-1000 rated for 7,100 x g (For IEC rotors, use Cat. No. 3120-1010)
- 3120-1010 rated for 7,100 x g

Cat. No.3120	-0250	-0500	-9500**	-1000	-1010
Nom. Cap., ml	250	500	500	1000	1000
No. per Pkg	4	4	4	4	4
No. per Case	36	24	24	16	16

*Centrifuge bottle adapter sold separetly Cat. No. DS3125-0250.

**For proper performance bottles must NOT be filled to more then 75% of total capacity.

3121 Wide-Mouth Centrifuge Bottle, high-density polyethylene; polypropylene screw closure

For use in refrigerated centrifuges. Rated for temperatures as low as -100°C and forces up to 8000 x g. Better chemical resistance than polycarbonate. When using this bottle in the Sorvall GSA rotor use the NALGENE centrifuge bottle adapter (Cat. No. DS3125-0250). For proper performance these bottles must be filled to at least 80% of the total capacity.

Cat. No.3121	-0250
Nom. Cap., ml	250
No. per Pkg	6
No. per Case	36

3122 Centrifuge Bottles, polycarbonate; polypropylene screw closure

Narrow-mouth design with excellent mechanical strength. For leakproof service at maximum rated speeds or when spinning hazardous materials, NALGENE sealing cap assemblies (Cat. No. DS3131) are required for 250-ml size (Cat. No. 3122-0250); NALGENE sealing caps (Cat. No. DS3132) for 1000-ml sizes (Cat. Nos. 3122-1000 and 3122-1010).[1] When using the 250-ml bottle (Cat. No. 3122-0250) in the Sorvall GSA rotor, use the NALGENE centrifuge bottle adapter (Cat. No. DS3125-0250). Before autoclaving, set closure on top of the bottle without engaging the threads. For proper performance must be filled to at least 80% of the total capacity.[2] **Autoclavable/Transparent**

Maximum ratings:

- 3122-0250 rated for 27,500 x g
- 3122-0500 rated for 13,700 x g
- 3122-1000 rated for 7,100 x g (For IEC rotors, use Cat. No. 3122-1010)
- 3122-1010 rated for 7,100 x g

Cat. No.3122	-0250	-0500	-1000	-1010
Nom. Cap., ml	250	500	1000	1000
No. per Pkg	4	4	4	4
No. per Case	36	24	16	16

*[1]Sealing caps and assemblies available separately. Sealing cap not available for Cat. No. 3122-0500.

†[2]Refer to NALGENE Tube and Bottle Selector Guide for complete speed, closure and accessory information.

3127 Centrifuge Bottle, Teflon* FEP; Tefzel* ETFE screw closure

Ideal bottle for low-speed centrifugation of aggressive chemicals. Excellent for large-volume lipid and phenol extractions, digestions and precipitations. Resists most acids, bases and organic solvents. Autoclavable bottle rated for temperatures from -100° to +150°C. Use NALGENE sealing cap assembly (Cat. No. DS3131-0038) to run this bottle at maximum recommended speed (4,000 x g). When using this bottle in the Sorvall GSA rotor use the NALGENE centrifuge bottle adapter (Cat. No. DS3125-0250). Before autoclaving, just set closure on top of the bottle without engaging the threads. NOTE: FEP centrifuge bottle must be filled to 100% of the total capacity for proper performance.

Autoclavable/Leakproof/Teflon FEP *Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

Cat. No.3127	-0250
Nom. Cap., ml	250
No. per Pkg	1
No. per Case	6

WARNING! All centrifuge ware must be filled to at least 80% of total capacity for proper performance unless otherwise noted.

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3140 Centrifuge Bottles with Sealing Cap, polycarbonate; polypropylene screw closure; silicone gasket

Bottles feature wide-mouth sealing cap closure and clarity and mechanical strength. 250-ml bottle is rated for speeds up to 27,500 x g; 500-ml bottle is rated for speeds up to 13,700 x g. When using the 250-ml bottle in the Sorvall GSA rotor, use NALGENE centrifuge bottle adapter (Cat. No. DS3125-0250) available separately. Before autoclaving, just set closure on top of the bottle without engaging the threads. For proper performance these bottles must be filled to at least 80% of the total capacity.

Autoclavable/Transparent

Cat. No.3140	-0250	-0500
Nom. Cap., ml	250	450
No. per Pkg	4	4
No. per Case	36	24

NALGENE Sealing Caps, Cat. Nos. DS3132-0058 and -0063, are also available separately.

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3141 Centrifuge Bottles with Sealing Cap, polypropylene copolymer; polypropylene screw closure; silicone gasket

Bottles feature wide-mouth sealing cap closure and excellent chemical resistance. 250-ml bottle is rated for speeds up to 27,500 x g; 500-ml bottle is rated for speeds up to 13,700 x g. When using the 250-ml bottle in the Sorvall GSA rotor, use NALGENE centrifuge bottle adapter (Cat. No. DS3125-0250), available separately. Before autoclaving, just set closure on top of the bottle without engaging the threads. For proper performance these bottles must be filled to at least 80% of the total capacity.

Autoclavable

Cat. No.3141	-0250	-0500
Nom. Cap., ml	250	450
No. per Pkg	4	4
No. per Case	36	24

NALGENE Sealing Caps, Cat. Nos. DS3132-0058 and -0063, are also available separately.

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3123 Spherical-Bottom Centrifuge Bottle, polycarbonate; polypropylene screw closure

Rated for forces up to 27,500 x g. Spherical-bottom design facilitates pellet formation and retrieval. For leakproof service at high speeds or when spinning hazardous materials, use NALGENE sealing cap assembly (Cat. No. DS3131-0038). Use with NALGENE support, Cat. No. DS3124-0010 available separately. Before autoclaving, set closure on top of the bottle without engaging the threads. For proper performance these bottles must be filled to at least 80% of the total capacity. **Autoclavable/Transparent**

Cat. No.3123	-0250
Nom. Cap., ml	250
No. per Pkg	4
No. per Case	36

3143 Conical-Bottom Centrifuge Bottle, polypropylene copolymer; sealing cap* (polypropylene screw closure with silicone gasket)

Translucent bottles with excellent chemical resistance. Molded-in graduations. Designed for pelleting applications such as cell culture harvesting and protein biochemistry, including ammonium sulfate precipitations. Excellent for use in refrigerated or non-refrigerated centrifuges up to 27,500 x g. for proper performance these bottles must be filled to at least 80% of the total capacity.

Must be used with NALGENE adapter for conical-bottom centrifuge bottles (Cat. No. DS3126-0175). Overall height with closure and adapter is 143 mm. Before autoclaving, just set closure on top of bottle without engaging the threads. **Autoclavable/Graduated/Leakproof**

*Replacement sealing cap is Cat. No. DS3132-0058.

Cat. No.3143	-0175
Actual Capacity, ml	175
No. per Pkg	4
No. per Case	36

3144 Conical-Bottom Centrifuge Bottle, polycarbonate; sealing cap* (polypropylene screw closure with silicone gasket)

Excellent mechanical strength. Molded-in graduations. For use in refrigerated and non-refrigerated centrifuges up to 27,500 x g. Must be used with NALGENE adapter for conical-bottom centrifuge bottles (Cat. No. DS3126-0175). Before autoclaving, just set closure on top of bottle without engaging the threads. For proper performance these bottles must be filled to at least 80% of the total capacity.

Autoclavable/Transparent/Leakproof *Replacement sealing cap is Cat. No. DS3132-0058.

Cat. No.3144	-0175
Actual Capacity, ml	175
No. per Pkg	4
No. per Case	36

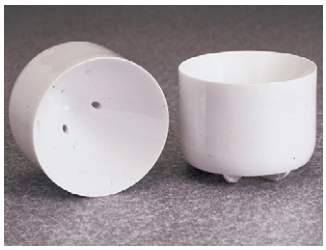
3145 Sterile Conical-Bottom Centrifuge Bottle, polystyrene; high-density polyethylene screw closure

Economical and disposable. Excellent for sterile cell culture applications. Designed for use in low-speed refrigerated or non-refrigerated centrifuges up to 5,800 x g. Bottle and closure are gamma-radiation sterilized. Molded-in graduations. Individually packaged. Must be used with NALGENE adapter for conical-bottom centrifuge bottles (Cat. No. DS3126-0175). For proper performance these bottles must be filled to at least 80% of the total capacity. **Sterile/Transparent/Graduated/Leakproof**

Cat. No.3145	-0175
Actual Capacity, ml	175
No. per Pkg	12
No. per Case	48

NALGENE labware is for research use only, not for "***In Vitro***" diagnosis or parenterals.

DS3126 Conical-Bottom Centrifuge Bottle Adapter, white polycarbonate



NALGENE conical-bottom centrifuge bottles (Cat. Nos. 3143, 3144, 3145) MUST be used with this adapter. Fits most commonly used low- and high-speed rotors. This adapter is not interchangeable with adapters from other manufacturers. **Autoclavable**

Cat. No.DS3126	-0175
O.D., mm	61
No. per Case	4

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DS3111 Centrifuge Tube Closures, polypropylene

Translucent friction-fit closures designed for both NALGENE round and conical centrifuge tubes. May not provide liquid-tight seal during high-speed centrifugation. Cat. No. DS3111-0030 fits round, non-lipped 50-ml centrifuge tubes only. **Autoclavable**

Cat. No.	Closure Size, mm	No. per Case
DS3111-0012	12	20
DS3111-0013	13	20
DS3111-0016	16	20
DS3111-0017	17	20
DS3111-0018	18	20
DS3111-0025	25	20
DS3111-0029	29	20
DS3111-0030	30	20
DS3111-0032	32	20

Centrifuge Tube and Friction Fit Closure Guide

NALGENE Tube O.D. x L	Cap., ml	Speed Rating	Centrifuge Tube Cat. No.	Friction Fit Sealing Closure Cat. No.
17 x 119 mm	15	6,000 x g	3103-0015	DS3111-0017
28.5 x 133 mm	50	6,000 x g	3103-0050	DS3111-0029
17 x 120 mm	15	6,000 x g	3105-0015	DS3111-0017
28.5 x 135 mm	50	6,000 x g	3105-0050	DS3111-0029
28.5 x 101 mm	50	10,000 x g	DS3112-0050	DS3111-0029
16 x 104 mm	12	50,000 x g	3117-0120	DS3111-0016
16 x 114 mm	15	50,000 x g	3117-0150	DS3111-0016
18 x 101 mm	16	50,000 x g	3117-0160	DS3111-0018
26 x 89 mm	38	50,000 x g	3117-0380	DS3111-0025
29 x 104 mm	50	50,000 x g	3117-0500	DS3111-0029
28.5 x 106 mm	50	50,000 x g	3117-9500	DS3111-0029
32 x 165 mm	100	50,000 x g	3117-1000	DS3111-0032
16 x 103 mm	12	50,000 x g	3110-0120	DS3111-0016
16 x 114 mm	15	50,000 x g	3110-0150	DS3111-0016
18 x 99 mm	16	50,000 x g	3110-0160	DS3111-0018
25 x 89 mm	38	50,000 x g	3110-0380	DS3111-0025
29 x 103 mm	50	50,000 x g	3110-0500	DS3111-0029
28.5 x 104 mm	50	50,000 x g	3110-9500	DS3111-0029
32 x 164 mm	100	50,000 x g	3110-1000	DS3111-0032

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DS3131 Sealing Cap Assemblies, polypropylene screw closure, Tefzel*, ETFE plug, Viton* fluoroelastomer O-ring; polypropylene shoulder support ring (Cat. No. DS3131-0038 only)

Teflon* FEP [1]autoclavable assemblies seal NALGENE Oak Ridge centrifuge tubes and bottles. For use at recommended maximum speeds (10,000 x g or greater) without leakage, even when full. Also recommended for spinning hazardous materials compatible with centrifuge tube material. Cat. No.DS3131-0038 features shoulder support ring to prevent shifting, binding or collapse of bottle neck. Before autoclaving, set closure on top of the container without engaging the threads.

Biohazard/Leakproof/Autoclavable *Or equivalent. Teflon, Tefzel and Viton are registered trademarks of DuPont.

Cat. No.DS3131	-0020	-0024
Fits Closure Size	20	24
Fits NALGENE Tubes	3114-0030	3114-0050
No. per Case	2	2

Cat. No.DS3131	-0038
Fits Closure Size	38
Fits NALGENE Bottles	3120-0250; 3122-0250; 3123-0250; 3127-0250
No. per Case	2

*[1]Refer to NALGENE Tube and Bottle Selector Guide for complete speed, closure and accessory information.

DS3132 Sealing Caps, Oak Ridge Style, polypropylene screw closure; silicone gasket

Oak Ridge Style sealing caps ensure leakproof service of NALGENE centrifuge tubes and bottles at their recommended maximum speeds (10,000 x g or greater), even when full. Also recommended for spinning hazardous materials compatible with centrifuge tube or bottle material. Before autoclaving, set closure on top of the container without engaging the threads. **Autoclavable/Biohazard/Leakproof**

Cat. No.	Fits Closure Size	Fits NALGENE	No. per Case
DS3132-0020	20	3115-0030; 3118-0028; 3118-0030; 3119-0028;3119-0030; 3137-0030; 3138-0030; 3139-0030	2
DS3132-0024	24	3115-0050; 3118-0050; 3119-0050; 3137-0050*; 3138-0050; 3139-0050; 3146-0050; 3148-0050	2
DS3132-0058	58	3140-0250*; 3141-0250*	2
DS3132-0063	63	3120-1000; 3120-1010; 3122-1000; 3122-1010; 3140-0500; 3141-0500	2

*Bottles are not available separately, they are available only with sealing caps. For replacement parts, see Reference/Replacement Closures.

DS3147 Oak Ridge Conical Tube Adapter, white polycarbonate

Must be used with NALGENE 35-ml conical Oak Ridge tubes (Cat. Nos. 3146, 3148). Easily removed from rotors after use. **Autoclavable**

Cat. No.DS3147	-0050
No. per Pkg	6

DS3124 Support for Spherical-Bottom Centrifuge Bottle, white polycarbonate

For use in standard centrifuge rotors with spherical-bottom centrifuge bottles. O.D. is 61.7 mm. Total height of NALGENE spherical-bottom centrifuge bottle, with closure and support, is 137.5 mm.
Autoclavable

Cat. No.DS3124	-0010
No. per Case	4

DS3125 Centrifuge Bottle Adapter, white low-density polyethylene

For use with NALGENE and most other 250-ml centrifuge bottles in Sorvall GSA rotors. Use with NALGENE centrifuge bottles: Cat. Nos. 3120, 3121, 3122, 3127, 3140, 3141.

Cat. No.DS3125	-0250
Dia., mm	61.5
No. per Case	6

Capacity & Versatility

Thermo Scientific Sorvall Legend T Plus & RT Plus

Unmatched versatility meets exceptional throughput

The Thermo Scientific Sorvall Legend T Plus and RT Plus deliver unprecedented speed and capacity together with the widest range of rotors and adapters available for a three-liter centrifuge.

FIBERLite F14-6x250LE

Thermo Scientific Sorvall Legend RT Plus

NALGENE

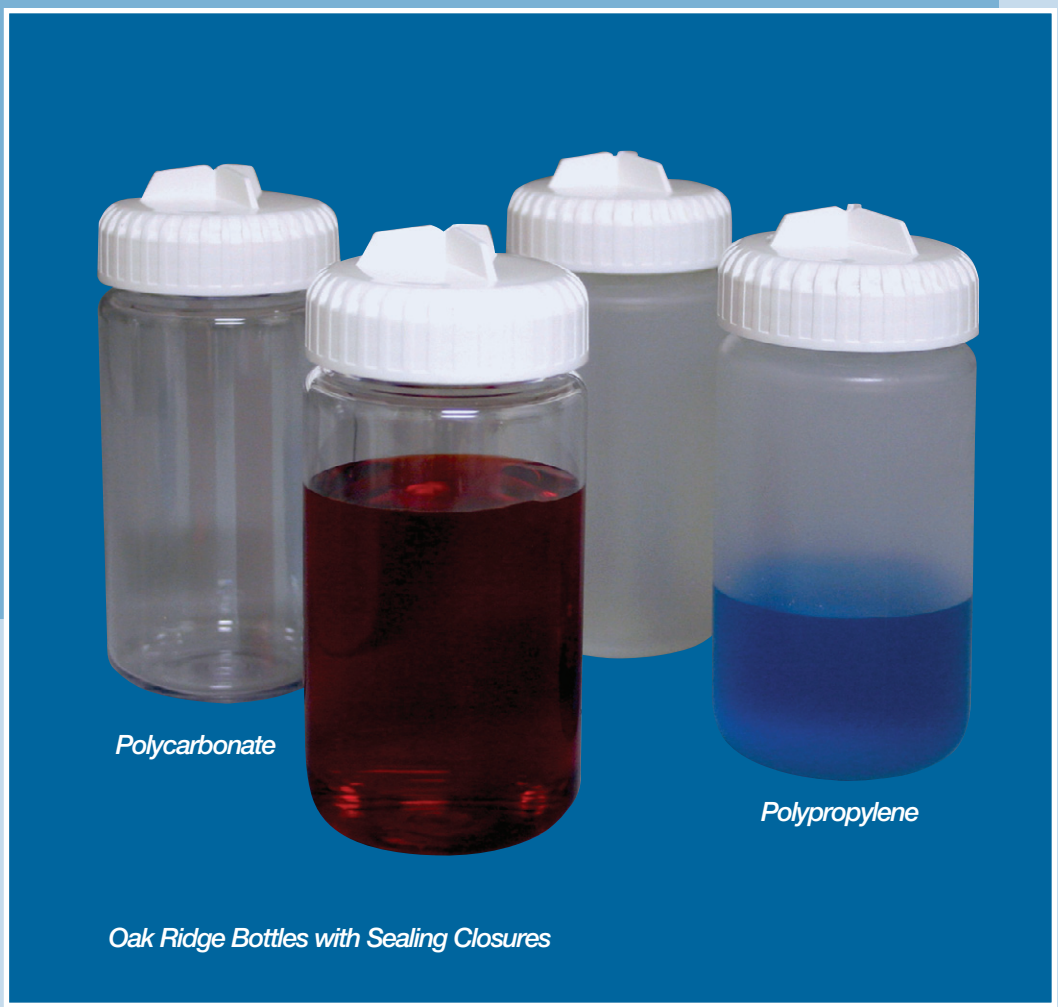
Oak Ridge Bottle 6 X 250 mL

Push your productivity to the next level with this three-part system

Proven quality, reliability and durability

Oak Ridge Bottles

- *Leakproof, autoclavable, easy to clean*
- *Sealing closure for high speed performance*
- *Wide mouth, for easy pellet removal*
- *Excellent chemical resistance (polypropylene)*
- *Excellent clarity (polycarbonate)*



Oak Ridge Bottles with Sealing Closures

To learn more about this system, contact your Thermo Scientific representative at 1-866-984-3766 or visit us online at: www.thermo.com/centrifuge or www.NALGENElabware.com

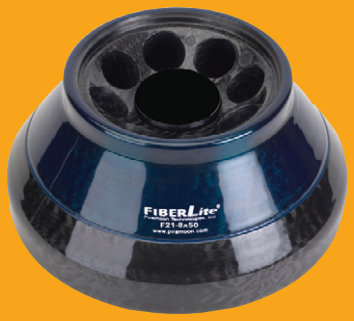
High Productivity

Thermo Scientific Sorvall RC-6 Plus

One system maximizes workflow and production

The Thermo Scientific Sorvall RC-6 Plus is a powerful, compact centrifuge that ensures consistent, high-quality separations for your high-volume processing requirements. Meets CE and CSA safety requirements without the need to anchor the unit to the floor. Samples are processed at atmospheric pressure, eliminating vacuum seals and filters, and reducing tube and bottle leakage.

Thermo Scientific Sorvall RC-6 Plus



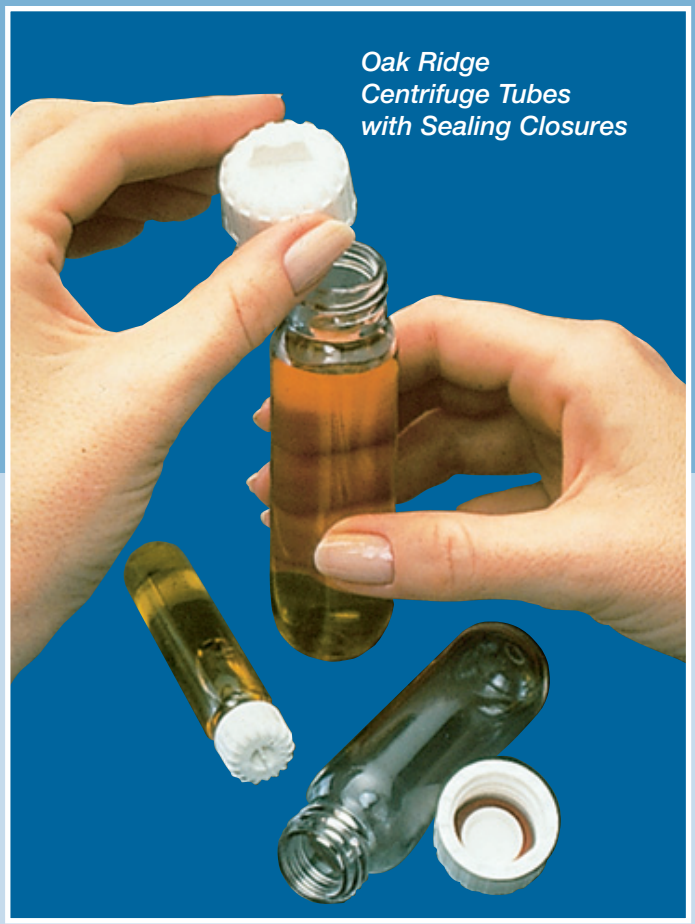
FIBERLite F21S-8x50

Pair NALGENE Oak Ridge Tubes with FIBERLite and the Thermo Scientific Sorvall RC-6 Plus for High Productivity

From pelleting bacteria to protein purification to aggressive organic phase separations – choose NALGENE tubes

Oak Ridge Tubes

- ***Leakproof, autoclavable***
- ***Sealing closure for high speed performance***
- ***Use TEFLON® tubes for aggressive organic separations***
- ***Excellent chemical resistance (polypropylene)***
- ***Excellent clarity (polycarbonate)***



Oak Ridge Centrifuge Tubes with Sealing Closures

NALGENE

Oak Ridge Tubes 8 X 50 mL

To learn more about this system, contact your Thermo Scientific representative at 1-866-984-3766 or visit us online at: www.thermo.com/centrifuge or www.NALGENElabware.com

High Throughput

Thermo Scientific Sorvall Evolution RC

Advanced separations

The Thermo Scientific Sorvall Evolution RC Superspeed Centrifuge offers the most advanced technology in the world. It accomplishes one simple objective – making users more productive. The Sorvall Evolution RC offers unmatched productivity through simplified sample handling, reduced overall spin times and superior ergonomics.

Thermo Scientific
Sorvall Evolution RC

F8S-6x1000y
F9S-4x1000y

Combine NALGENE Oak Ridge Bottles, FIBERLite Rotors and the Thermo Scientific Sorvall Evolution RC and get High Throughput

Separate a 6L harvest at superspeed

In a single run you can achieve greater levels of productivity, so you can focus on results! Choose these and other high quality centrifuge bottles with proven results that only NALGENE products can give your lab.

NEW! Oak Ridge Bottle, 1L

- *Leakproof, autoclavable, easy to clean*
- *Sealing closure for highspeed performance*
- *Wide mouth, easy to remove pellets*
- *Excellent chemical resistance (polypropylene)*
- *Excellent clarity (polycarbonate)*

1L Oak Ridge Centrifuge Bottle with Sealing Closure

NALGENE

Oak Ridge Bottle 6 X 1L

Available Soon!

To learn more about this system, contact your Thermo Scientific representative at 1-866-984-3766 or visit us online at: www.thermo.com/centrifuge or www.NALGENElabware.com

High Volume

Thermo Scientific Sorvall RC12BP

Easily separate a 12L harvest in a single run

The Thermo Scientific Sorvall RC12BP Bio-Processing System is a powerful and easy-to-use solution. This system allows you to spin up to 12 liters of sample quickly and cost-effectively while ensuring product quality, safety, and compliance. Use up to maximum of 7,333 x g.

H-12000 Swinging-Bucket Rotor

Thermo Scientific Sorvall RC12BP

NALGENE 2L Bio•Bottle pairs with the Thermo Scientific Sorvall RC12BP and bucket rotor for optimal output

Simplify downstream bioprocess of large volume DNA preparations, protein preparations, bacterial/cell culture or vaccine production - 12L clean up in just one run.

Oak Ridge Bio•Bottle

- *Autoclavable, easy to clean*
- *Sealing closure for leakproof performance*
- *Excellent chemical resistance (polypropylene)*
- *Fits Sorvall H12000 rotor*

NALGENE

Bio•Bottle 6 X 2L

2L Bio•Bottle Polypropylene Centrifuge Bottle with Sealing Closure

Available Soon!

To learn more about this system, contact your Thermo Scientific representative at 1-866-984-3766 or visit us online at: www.thermo.com/centrifuge or www.NALGENElabware.com

Use and Cleaning Guide

Inspection

Inspect centrifuge tubes and bottles carefully before each use. Centrifuge ware is subjected to high g-forces while spinning, which can lead to failure. Safe laboratory practice requires that all centrifuge ware be inspected before each use. Plastic centrifuge ware is easy to inspect; it requires no special equipment. Initially, the effect of excessive stress in plastic can be seen as cloudiness and discoloration or as "crazing," i.e. minute cracks visible when the tube is held at an angle in front of a bright light. With continued use, a crazed tube will develop larger cracks or will fail. Tubes should be discarded if cracks are readily visible to the unaided eye.

Rotor Balancing

Consult your centrifuge operator's manual for instructions on rotor balancing and handling. Proper rotor handling, cleaning and balancing are extremely important. Because plastics have different densities, tubes and bottles of different styles or materials should not be arranged randomly in the rotor.

Tube and Bottle Selection

NALGENE brand products make it easy for you to select the right centrifuge tube or bottle for your application. You'll find just what you'll need to make the right selection at www.nalgenelabware.com. The site includes product information in the NALGENE on-line catalog, a comprehensive rotor matching, capacity and rotor speed recommendations, plus product-specific chemical resistance information.

Recommended Guidelines

- Be sure to check the tube or bottle chemical resistance to both sample and solvent.
- Consider operating temperature when selecting a tube or bottle. The Low-High Speed Selector guide lists the maximum RCF at 4°C and 22°C. Use this information as a guideline.
- Be aware: plastic tubes will undergo some degree of softening or hardening outside these ranges.
- Additionally, temperature is not the only variable that causes deformation; centrifugal force, duration, type of rotor, fill volume and even tube angle all have an effect.

Your safest policy is to pre-test all tubes or bottles under actual conditions, but using water rather than samples. Carefully follow the rotor manufacturer's guidelines and product insert sheet information to ensure proper performance.

Cleaning

Disposable centrifuge ware should be discarded after one use. NOTE: When handling hazardous materials, decontaminate tubes prior to disposal. To clean reusable NALGENE centrifuge ware, we suggest the following procedure:

- To loosen any residuals, presoak the tubes or bottles in NALGENE L900 detergent. (See "General Cleaning" for specific recommendations.) Soak overnight to loosen stubborn residue.
- Remove residue with a non-abrasive brush, or with a rubber or fluoropolymer policeman.
- Wash and rinse product thoroughly, with distilled water as a final rinse.
- Air dry.

Sterilization

PP, PPCO, PMP, FEP and ETFE products can be autoclaved repeatedly under normal conditions, 20 minute cycle at 121°C/15 psig (1 bar). PC and PSF products can be autoclaved under these same conditions, but autoclaving will cause deterioration in mechanical strength and will shorten their usable life. If you autoclave PC or PSF products, be sure to follow the inspection guidelines as noted above.

When autoclaving NALGENE centrifuge ware, follow these guidelines:

- Clean and rinse tubes or bottles thoroughly with distilled water before autoclaving. Certain chemicals, including detergents, which have no appreciable effect on resins at room temperatures may cause deterioration at autoclaving temperatures.
- For bottles or tubes with closures, remove closures (cap and plug) completely before autoclaving to prevent collapse of container when cooling.

All NALGENE centrifuge ware can also be sterilized with ethylene oxide gas or compatible chemical disinfectants.

Effects of Chemicals

Chemicals can affect the strength, flexibility, surface appearance, color, dimensions and weight of plastic parts. Chemical resistance is influenced by temperature, duration and frequency of exposure, chemical concentration and centrifugal force. Physical changes which may be caused by chemical exposure include:

- Absorption of solvents, resulting in softening or swelling of the plastic
- Permeation of solvent through the plastic
- Dissolution of polymer in the solvent
- Stress-cracking, which may occur as a result of chemical exposure combined with external stress of centrifugal forces on tubes or bottles, which can be worsened by improper fit in a rotor cavity.

Refer to the Centrifuge Ware Chemical Resistance Chart for information on specific materials.

A Note on the "Unbreakability" of NALGENE Centrifuge Ware: NALGENE centrifuge tubes and bottles should not break or crack if used in a properly fitting rotor and run according to our recommendations regarding chemical resistance, temperature limits, relative centrifugal force ratings, use of closures, washing and autoclaving. If the limits are exceeded, the tube or bottle may fail during centrifugation (i.e. may crack or break). However, unlike glass, a NALGENE tube or bottle will not shatter, thus minimizing the risk to users and equipment.

Rotor Matching Guide

INSTRUCTIONS: *Internet*

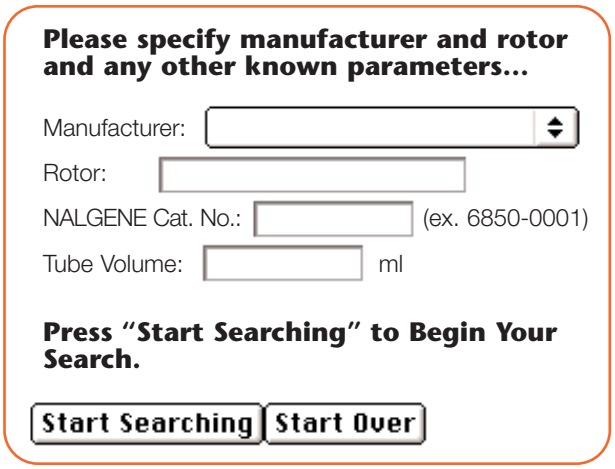
Visit www.NALGENElabware.com/centrifugeware to search our comprehensive database.

This on-line selection guide provides you with a convenient way of matching NALGENE centrifuge ware with the application in which you are using it. Variables for the proper selection of centrifuge ware include details about the centrifuge to-be-used, centrifugation speed, and reagents.

Our Rotor Matching Database contains information on approximately 100,000 rotors from over 25 different centrifuge manufacturers including:

ALC/Astell	Fisher/Marathon	Kabota	Sigma/Bruan
Beckman	Forma	MSE	Sorvall
Eberbach Labtools	Hettich	PTI	Spintron
Eppendorf/Brinkman	Hitachi	Savant	Thermo Scientific
FIBER Lite	Kokusan	Shelton Scientific	Tomy

Your search may take a few seconds to complete. It's easy to use: just specify manufacturer and rotor and any other known parameters; then click on start searching.



Low & High Speed Selector Guide

Product Ref. Code	Nominal Vol., ml	Catalog Number	Description	Nom. Dim. Dia. x Ht., mm	Material	Maximum RCF 4°C	Maximum RCF 22°C	Closure Cat. No.	Sealing Cap Cat. No.	Rack† Cat. No.
AD	10	3114-0010	Oak Ridge tube, Screw top	16.0 x 81.5	FEP	50,000*	50,000*	71-2174-0130		5970-0x16
AD	10	3115-0010	Oak Ridge tube, Screw top	16.0 x 82.0	PSF	50,000	50,000	71-2150-0130		5970-0x16
AD	10	3118-0010	Oak Ridge tube, Screw top	16.1 x 81.7	PC	50,000	50,000	71-2150-0130		5970-0x16
AD	10	3119-0010	Oak Ridge tube, Screw top	16.0 x 81.4	PPCO	50,000	50,000	71-2150-0130		5970-0x16
AE	10	3138-0010	Oak Ridge tube, Sealing Cap	16.1 x 82.3	PC	50,000	50,000		Included	5970-0x16
AE	10	3139-0010	Oak Ridge tube, Sealing Cap	16.0 x 82.0	PPCO	50,000	50,000		Included	5970-0x16
AG	12	3110-0120	Round tube, Open top	15.9 x 103.0	PPCO	50,000	50,000	DS3111-0016		5970-0x16
AG	12	3117-0120	Round tube, Open top	16.0 x 103.5	PC	50,000	50,000	DS3111-0016		5970-0x16
AH	15	3103-0015	Conical bottom tube, Open top	16.9 x 118.9	PPCO	6,000	6,000	DS3111-0017		5970-0x16
AH	15	3105-0015	Conical bottom tube, Open top	16.9 x 120.2	PC	6,000	6,000	DS3111-0017		5970-0x16
AJ	15	3110-0150	Round tube, Open top	15.9 x 113.9	PPCO	50,000	50,000	DS3111-0016		5970-0x16
AJ	15	3117-0150	Round tube, Open top	16.1 x 114.3	PC	50,000	50,000	DS3111-0016		5970-0x16
AK	16	3138-0016	Oak Ridge tube, Sealing Cap	18.2 x 106.9	PC	50,000	50,000		Included	5970-0x20
AK	16	3139-0016	Oak Ridge tube, Sealing Cap	17.9 x 106.6	PPCO	50,000	50,000		Included	5970-0x20
AM	16	3110-0160	Round tube, Open top	18.0 x 99.3	PPCO	50,000	50,000	DS3111-0018		5970-0x20
AM	16	3117-0160	Round tube, Open top	18.1 x 100.6	PC	50,000	50,000	DS3111-0018		5970-0x20
AP	28	3118-0028	Oak Ridge tube, Screw top	25.4 x 101.8	PC	50,000	50,000	71-2150-0200		5930-0025
AP	28	3119-0028	Oak Ridge tube, Screw top	25.4 x 101.9	PPCO	50,000	50,000	71-2150-0200		5930-0025
AS	30	3114-0030	Oak Ridge tube, Screw top	25.7 x 93.7	FEP	50,000	20,000	71-2174-0200	DS3131-0020	5930-0025
AS	30	3115-0030	Oak Ridge tube, Screw top	25.7 x 94.5	PSF	50,000	50,000	71-2150-0200	DS3132-0020	5930-0025
AS	30	3118-0030	Oak Ridge tube, Screw top	25.7 x 94.5	PC	50,000	50,000	71-2150-0200	DS3132-0020	5930-0025
AS	30	3119-0030	Oak Ridge tube, Screw top	25.5 x 94.3	PPCO	50,000	50,000	71-2150-0200	DS3132-0020	5930-0025
AT	30	3137-0030	Oak Ridge tube, Sealing Cap	25.7 x 101.6	PSF	50,000	50,000	DS3132-0020	DS3132-0020	5930-0025
AT	30	3138-0030	Oak Ridge tube, Sealing Cap	25.7 x 101.6	PC	50,000	50,000	DS3132-0020	DS3132-0020	5930-0025
AT	30	3139-0030	Oak Ridge tube, Sealing Cap	25.5 x 101.4	PPCO	50,000	50,000	DS3132-0020	DS3132-0020	5930-0025
AW	35	3146-0050	Conical Oak Ridge tube, Sealing Cap	28.8 x 114.1	PC	50,000	50,000	71-2150-0240	DS3132-0024	5930-0025
AW	35	3148-0050	Conical Oak Ridge tube, Sealing Cap	28.6 x 113.8	PPCO	50,000	50,000	71-2150-0240	DS3132-0024	5930-0025
AX	38	3110-0380	Round tube, Open top	25.4 x 89.1	PPCO	50,000	50,000	DS3111-0025		5930-0025
AX	38	3117-0380	Round tube, Open top	25.5 x 89.4	PC	50,000	50,000	DS3111-0025		5930-0025
AZ	50	3103-0050	Conical bottom tube, Open top	28.6 x 133.4	PPCO	6,000	6,000	DS3111-0029		5970-0030
AZ	50	3105-0050	Conical bottom tube, Open top	28.9 x 134.5	PC	6,000	6,000	DS3111-0029		5970-0030
BA	50	3114-0050	Oak Ridge tube, Screw top	28.8 x 107.7	FEP	50,000	20,000	71-2174-0240	DS3131-0024	5970-0030
BA	50	3115-0050	Oak Ridge tube, Screw top	29.0 x 107.7	PSF	50,000	50,000	71-2150-0240	DS3132-0024	5970-0030
BA	50	3118-0050	Oak Ridge tube, Screw top	28.8 x 107.0	PC	50,000	50,000	71-2150-0240	DS3132-0024	5970-0030
BA	50	3119-0050	Oak Ridge tube, Screw top	28.8 x 106.7	PPCO	50,000	50,000	71-2150-0240	DS3132-0024	5970-0030
BB	50	3137-0050	Oak Ridge tube, Sealing Cap	29.0 x 115.3	PSF	50,000	50,000	DS3132-0024	DS3132-0024	5970-0030
BB	50	3138-0050	Oak Ridge tube, Sealing Cap	28.8 x 115.0	PC	50,000	50,000	DS3132-0024	DS3132-0024	5970-0030
BB	50	3139-0050	Oak Ridge tube, Sealing Cap	28.8 x 114.1	PPCO	50,000	50,000	DS3132-0024	DS3132-0024	5970-0030
BC	50	3110-0500	Round tube, Open top	28.7 x 103.3	PPCO	50,000	50,000	DS3111-0030		5970-0030
BC	50	3117-0500	Round tube, Open top	29.3 x 103.8	PC	50,000	50,000	DS3111-0030		5970-0030

Low & High Speed Selector Guide

Product Ref. Code	Nominal Vol., ml	Catalog Number	Description	Nom. Dim. Dia. x Ht., mm	Material	Maximum RCF 4°C	Maximum RCF 22°C	Closure Cat. No.	Sealing Cap Cat. No.	Rack† Cat. No.
BD	50	3110-9500	Round tube with lip, Open top	28.7 x 104.2	PPCO	50,000	50,000	DS3111-0029		5970-0030
BD	50	DS3112-0050	Round tube with lip, Open top	28.7 x 101.1	LDPE	10,000	7,000	DS3111-0029		5970-0030
BD	50	3117-9500	Round tube with lip, Open top	28.7 x 106.4	PC	50,000	50,000	DS3111-0029		5970-0030
BE	85	3118-0085	Oak Ridge tube, Screw top	38.2 x 105.7	PC	50,000	50,000	71-2150-0330		
BG	100	3110-1000	Round tube with lip, Open top	31.8 x 164.1	PPCO	50,000	50,000	DS3111-0032		5970-0030
BG	100	3117-1000	Round tube with lip, Open top	31.8 x 165.1	PC	50,000	50,000	DS3111-0032		5970-0030
BJ	175	3143-0175	Conical Wide-Mouth Bottle, Sealing Cap	61.5 x 143.5	PPCO	27,500	27,500	DS3132-0058	DS3132-0058	
BJ	175	3144-0175	Conical Wide-Mouth Bottle, Sealing Cap	61.4 x 144.3	PC	27,500	27,500	DS3132-0058	DS3132-0058	
BK	175	3145-0175	Conical Wide-Mouth Bottle, Sterile	61.5 x 135.6	PS	5,800	5,800	71-2150-0530		
BM	250	3120-0250	Bottle, Screw top	61.8 x 127.7	PPCO	27,500	27,500	71-2150-0380	DS3131-0038	
BM	250	3122-0250	Bottle, Screw top	61.8 x 127.6	PC	27,500	27,500	71-2150-0380	DS3131-0038	
BN	250	3121-0250	Wide-mouth bottle, Screw top	61.2 x 131.9	HDPE	8,000	8,000	71-2150-0430		
BP	250	3123-0250	Spherical Bottom Bottle, Screw top	61.9 x 145.8	PC	27,500	27,500	71-2150-0380	DS3131-0038	
BS	250	3127-0250	Bottle, Screw top	60.0 x 128.8	FEP	4,000	NR	71-2174-0380	DS3131-0038	
BT	250	3140-0250	Wide-Mouth Bottle, Sealing Cap	61.5 x 135.1	PC	27,500	27,500	DS3132-0058	DS3132-0058	
BT	250	3141-0250	Wide-Mouth Bottle, Sealing Cap	60.7 x 133.4	PPCO	27,500	27,500	DS3132-0058	DS3132-0058	
BX	450	3140-0500	Wide-Mouth Bottle, Sealing Cap	69.5 x 160.0	PC	13,700	13,700	DS3132-0063	DS3132-0063	
BX	450	3141-0500	Wide-Mouth Bottle, Sealing Cap	69.5 x 160.0	PPCO	13,700	13,700	DS3132-0063	DS3132-0063	
BZ	500	3120-0500	Bottle, Screw top	73.8 x 169.8	PPCO	4,800	4,800	71-2150-0480		
CA	500	3120-9500	Bottle, Screw top	69.5 x 170.2	PPCO	4,800	4,800	71-2150-0480		
CA	500	3122-0500	Bottle, Screw top	69.5 x 169.6	PC	13,700	13,700	71-2150-0480		
CB	1000	3120-1000	Bottle, Screw top	97.5 x 184.5	PPCO	7,100	7,100	71-2150-0630	DS3132-0063	
CB	1000	3122-1000	Bottle, Screw top	97.6 x 188.4	PC	7,100	7,100	71-2150-0630	DS3132-0063	
CC	1000	3120-1010	Bottle, Screw top	97.7 x 179.0	PPCO	7,100	7,100	71-2150-0630	DS3132-0063	
CC	1000	3122-1010	Bottle, Screw top	98.1 x 180.2	PC	7,100	7,100	71-2150-0630	DS3132-0063	

Nominal Dimensions include any required NALGENE® adapters and sealing caps, sealing cap assemblies, where appropriate.

Included: Closures are provided; no replacement closures are available.

† The "x" represents the color code digit for the catalog number. Available colors are white, yellow, orange, blue, green and red.

* For use above 20,000 RCF always pre-test tubes.

www.NALGENElabware.com

On-Line Catalog – Search our on-line catalog for benchtop labware, centrifuge ware and for up-to-date product information.

Rotor Matching Guide – Searchable database containing today's most popular rotors with matches to NALGENE centrifuge products.

Chemical Resistance – Search for chemical resistance information online.

Centrifuge Ware Chemical Resistance

This chemical resistance chart is intended as a general guide only. Because of the difficulty in quantifying and organizing this information, no comprehensive data has been published on the chemical resistance of centrifuge ware.

BEFORE an actual run with a particular chemical, we strongly advise that you make a short trial run. You may also want to observe the effect of storing the chemical in the tube or bottle overnight.

If any doubt exists regarding a particular application, contact Nalgene Technical Support at 1-800-625-4327 or email Technical.nalgene@thermofisher.com

	Teflon* (FEP)	Tefzel* (ETFE)	Polypropylene Copolymer (PPCO)	Polycarbonate (PC)	Polyethylene (PE)	Polypropylene (PP)	Polysulfone (PSF)
2-Butanol	S	S	S	U	S	S	M
2-Butyl Alcohol	S	S	S	U	S	S	M
2-Mercaptoethanol	S	S	S	U	S	S	U
2-Propanol	S	S	S	U	S	S	U
3-Pentanone	S	M	U	U	U	M	U
Acetaldehyde, 100%	S	S	M	U	U	M	U
Acetic Acid, 5%	S	S	S	M	S	S1	S
Acetic Acid, 10%	S	S	S	M	M	S1	M
Acetic Acid 60%	S	S	S	U	M	M	U
Acetic Acid (Glacial)	S	S	M	U	U	M	U
Acetic Anhydride	S	S	M	U	U	M	U
Acetone	S	M	U	U	U	M	U
Acetonitrile	S	S	M	U	S	M	U
Acetophenone	S	S	M	U	M	M	U
Acetylene	S	S	U	U	U	M	–
Alconox (detergent)	S	S	S	U	M	S	M
Allyl Alcohol	S	S	S	U	U	S	M
Aluminum Chloride	S	S	S	S	S	S	S
Aluminum Fluoride	S	S	S	S	S	S	S
Aluminum Potassium Sulfate	S	S	S	S	S	S	S
Aluminum Sulfate	S	S	S	M	S	S	S
Ammonia	S	S	S1	U	S	S	M
Ammonium Acetate	S	S	S	U	S	S	M
Ammonium Carbonate, saturated	S	S	S	U	S	S	U
Ammonium Carbonate	S	S	S	U	S	S	–
Ammonium Chloride, saturated	S	S	S2	M	S2	S	S
Ammonium Chloride	S	S	S	M	S	S	S
Ammonium Hydroxide, 10%	S	S	S	U	S	S1	U
Ammonium Hydroxide, 28%	S	S	S	U	S	S1	U
Ammonium Hydroxide, Concentrated (30%)	S	S	S	U	S	S1	U
Ammonium Nitrate	S	S	S	M	S	S	S
Ammonium Persulfate	S	S	S	M	S	S	S
Ammonium Phosphate	S	S	S	M	S	S	S
Ammonium Sulfate, 77%	S	S	S	M	S	S	S
Ammonium Sulfate, saturated (77%)	S	S	S	M	S	S	S
Ammonium Sulfide, saturated	S	S	S	U	S	S	U
Ammonium Sulfide	S	S	S	U	S	S	U
Amyl Acetate	S	S	U	U	U	U	U
Amyl Alcohol	S	S	S	M	M	M	M
Aniline	S	S	U	U	U	M	U
Aqua Regia	S	S	U	U	U	U	U
Barium Salts	S	S	S	S	S	S	S
Benzaldehyde	S	S	M	U	U	M	U
Benzenamine	S	S	U	U	U	M	U
Benzene	S	S	U	U	U	U	U
Benzoic Acid	S	S	S	S	S	S	M
Benzyl Alcohol	S	S	U	U	U	U	U
beta-Mercaptoethanol	S	S	S	S	S	S	M
Boric Acid	S	S	S	S	S	S	S
Butane	S	S	M	U	U	S2	U
Butyl Acetate	S	S	U	U	U	U	U
Butyl Alcohol	S	S	M	U	S	S	M
Calcium Bisulfate	S	S	S	U	S	S	S
Calcium Chloride	S	S	S	M	S	S1	S
Calcium Hypochlorite	S	S	S	U	S	S	M

	Teflon* (FEP)	Tefzel* (ETFE)	Polypropylene Copolymer (PPCO)	Polycarbonate (PC)	Polyethylene (PE)	Polypropylene (PP)	Polysulfone (PSF)
Calcium Salts	S	S	S	U	S	S	M
Carbon Dioxide	S	S	S	S2	S	S	S
Carbon Disulfide	S	S	U	U	U	M	U
Carbon Tetrachloride	S	S	U	U	U	U	U
Cesium Acetate	S	S	S	S	S	S	S
Cesium Bromide	S	S	S	S	S	S	S
Cesium Chloride	S	S	S	S	S	S	S
Cesium Formate	S	S	S	S	S	S	S
Cesium Iodide	S	S	S	S	S	S	S
Cesium Sulfate	S	S	S	S	S	S	S
Chlorine, dry gas	S	S	U	M	M	U	U
Chlorine, water solution	S	S	M	M	U	M	U
Chlorine, wet gas	S	S	M	M	U	M	U
Chlorobenzene	S	M	U	U	U	U	U
Chloroethane	S	S	U	U	U	U	U
Chloroform	S	M	U	U	U	U	U
Chlorosulphonic Acid	S	M	U	U	U	U	U
Chromic Acid, 10%	S	S	S	M	S	S1	M
Chromic Acid, 30%	S	S	S1	M	M	S1	U
Chromic Acid, 50%	S	S	S1	U	U	M	U
Chromic Acid, 80%	S	S	S1	U	M	U	U
Citric Acid, 10%	S	S	S	M	M	S	S
Citric Acid	S	S	S	M	M	S	S
Copper Salts	S	S	S	S	S	S	S
Copper Sulfate	S	S	S	S	S	S	S
Cresol Mixture	S	M	M	U	U	U	U
Culture Media	S	S	S	S	S	S	S
Cyclohexane	S	S	M	U	M	M	U
Cyclohexanol	S	S	S	U	S	S	M
Cyclohexanone	S	S	M	U	M	M	U
Decalin	S	S	U	U	U	U	U
Deoxycholate	S	M	S	S	S	S	S
Dextran (Sulfate)	S	S	S	S	S	S	S
Dextran	S	S	S	S	S	S	S
Diacetone	S	M	M	U	U	S	U
Dibutyl Phthalate	S	M	M	U	U	M	U
Dichloroethane	S	M	U	U	U	U	U
Dichloroethylene	S	M	U	U	U	U	U
Diethyl Ether	S	M	U	U	U	U	U
Diethyl Ketone	S	M	U	U	M	M	U
Diethylpyrocarbonate (DEPC)	S	M	S	U	S	S	U
Dimethylformamide	S	M	S	U	S	S	U
Dimethylsulfoxide (DMSO)	S	M	S	U	S	S	U
Dioxane	S	S	M	U	M	M	U
Ethanol, 5%	S	S	S	M	S	S	S
Ethanol, 10%	S	S	S	M	S	S	M
Ethanol, 50%	S	S	S	U	S	S	U
Ethanol, 70%	S	S	S	U	M	S	U
Ethanol, 95%	S	S	S	U	M	S	U
Ethanol, 96%	S	S	S	U	M	S	U
Ethanol, 100%	S	S	S	U	M	S	U
Ethanolamine	S	S	S	U	S	S	U
Ethyl Acetate	S	S	S	U	M	M	U
Ethyl Alcohol, 5%	S	S	S	M	S	S	S
Ethyl Alcohol, 10%	S	S	S	M	S	S	M

Centrifuge Ware Chemical Resistance

	Teflon* (FEP)	Tefzel* (ETFE)	Polypropylene Copolymer (PPCO)	Polycarbonate (PC)	Polyethylene (PE)	Polypropylene (PP)	Polysulfone (PSF)
Ethyl Alcohol, 100%	S	S	S	U	M	S	U
Ethyl Alcohol, 50%	S	S	S	U	S	S	M
Ethyl Alcohol, 70%	S	S	S	U	M	S	U
Ethyl Alcohol, 95%	S	S	S	U	M	S	U
Ethyl Alcohol, 96%	S	S	S	U	M	S	U
Ethyl Chloride	S	S	U	U	U	U	U
Ethylene Dichloride	S	S	U	U	U	U	U
Ethylene Glycol	S	S	S	U	S	S	M
Ethylene Oxide Gas (ETO)	S	S	S	M	S	S	S
Ethylene Oxide, 100%	S	S	U	U	U	M	S
Fatty Acids - Saturated	S	S	S	U	M	S	M
Fatty Acids - Unsaturated	S	S	S	U	M	S	M
Ferric Chloride	S	S	S	M	S	S	S
Ferric Sulfate	S	S	S	S	S	S	S
Ferrous Chloride	S	S	S	M	S	S	S
Ferrous Sulfate	S	S	S	S	S	S	S
Ficoll-Hypaque	S	S	S	S	S	S	S
Fluoboric Acid	S	S	S	–	S	S	S
Formaldehyde, 5%	S	S	S	M	S	S1	S
Formaldehyde, 40%	S	S	S	M	M	M	M
Formalin, 5%	S	S	S	M	S	S1	S
Formalin, 40%	S	S	S	M	M	M	M
Formalin	S	S	S	M	M	M	M
Formic Acid, 3%	S	S	S	M	S	S	S
Formic Acid, 10%	S	S	S	M	S	S	M
Formic Acid, 100%	S	S	S	U	M	S	U
Formic Acid	S	S	S	U	M	S	S
Fuel Oil	S	S	U	M	U	M	S2
Furfural	S	S	U	U	U	U	U
Gallic Acid	S	S	S	U	S	S	U
Gasoline	S	S	U	U	M	U	U
Glutaraldehyde	S	S	S	S	S	S	M
Glycerine	S	S	S	S	S	S	S
Glycerol	S	S	S	S	S	S	S
Guanidine Hydrochloride	S	S	S	S	S	S	S
Haemo-Sol (detergent)	S	S	S	M	S	S	S
Hexane	S	S	U	U	U	M	U
Hydrochloric Acid, 5%	S	S	S	S	S	S	M
Hydrochloric Acid, 10%	S	S	S	M	S	S	M
Hydrochloric Acid, 30%	S	S	S	U	S	M	U
Hydrochloric Acid, 37%	S	S	S	U	S	M	U
Hydrochloric Acid, 50%	S	S	S	U	S	M	U
Hydrochloric Acid, Concentrated (38%)	S	S	S	U	M	M	U
Hydrocyanic Acid	S	S	S	–	S	S	–
Hydrofluoric Acid, 10%	S	S	S	M	S	S	M
Hydrofluoric Acid, 38%	S	S	S	U	S	S	U
Hydrofluoric Acid, 50%	S	S	S	U	M	S	U
Hydrofluoric Acid, 60%	S	S	S	U	M	M	U
Hydrofluoric Acid, 70%	S	S	S	U	M	M	U
Hydrofluoric Acid, 100%	S	S	S	U	M	M	U
Hydrofluoric Acid, Concentrated (53%)	S	S	S	U	M	M	U
Hydrogen Peroxide, 3%	S	S	S	S	S	S	S
Hydrogen Peroxide, 10%	S	S	S	S	S2	S	S
Hydrogen Peroxide, 30%	S	S	M	S	M	S2	S2
Hydrogen Peroxide, 100%	S	S	U	U	U	U	U
Hydrogen Peroxide, Concentrated (94%)	S	S	U	U	U	U	U
Hydrogen Sulfide, dry gas	S	S	S	M	S	S	–
Hydrogen Sulfide, wet gas	S	S	S	M	S	S	–
Hydroquinone	S	S	–	–	S	S	–
Iodine Solution	S	S1	S1	M	M	S1	–
Iodoacetic Acid	S1	S	S1	S	S1	S1	S1

	Teflon* (FEP)	Tefzel* (ETFE)	Polypropylene Copolymer (PPCO)	Polycarbonate (PC)	Polyethylene (PE)	Polypropylene (PP)	Polysulfone (PSF)
Iso-Butanol	S	S	S	U	S	S	U
Iso-Butyl Alcohol, 100%	S	S	S	U	S	S	U
Iso-Butyl Alcohol	S	S	S	U	S	S	U
iso-Octane	S	S	U	U	U	U	U
iso-Propanol, 100%	S	S	S	U	S	S	U
Isobutyl Alcohol	S	S	S	U	S	S	U
Isopropanol, 100%	S	S	S	U	S	S	U
Isopropyl Alcohol, 100%	S	S	S	U	S	S	U
Kerosene	S	S	M	U	M	M	U
Lacquer Thinner	S	S	U	U	U	U	U
Lactic Acid, 20%	S	S	S	S	S	S	U
Lactic Acid, 50%	S	S	S	M	S	S	U
Lactic Acid, 100%	S	S	S	M	S	S	U
Lauryl Alcohol	S	–	–	–	M	S	–
Lead Acetate	S	S	S	M	S	S	S
Magnesium Chloride	S	S	S	S	S	S	S
Magnesium Hydroxide, saturated	S	S	S	U	S	S	M
Magnesium Hydroxide	S	S	S	U	S	S	M
Magnesium Sulfate	S	S	S	S	S	S	S
Maleic Acid	S	S	S	M	S	S	M
Manganese Salts	S	S	S2	–	–	–	–
Mercaptoacetic Acid	S	S	S	U	U	U	U
Mercuric Chloride	S	S	S	S	S	S	–
Mercury Salts	S	S	S	S	S	S	–
Mercury	S	S	S	U	S1	S	S
Methanol, 10%	S	S	S	M	S	S	S
Methanol, 100%	S	S	S	U	M	S1	M
Methanol	S	S	S	U	M	S1	M
Methyl Alcohol (10%)	S	S	S	M	S	S	S
Methyl Alcohol, 100%	S	S	S	U	M	S1	M
Methyl Ethyl Ketone (MEK)	S	M	S	U	U	M	U
Methyl Isobutyl Ketone (MIBK)	S	S	M	U	U	S	U
Methylene Chloride	S	S	U	U	U	U	U
Metrizamide	S	S	S	S	S	S	S
Milk	S	S	S	S	S	S	S
n-Butyl Alcohol	S	S	S	U	S	S	M
n-Butyl Phthalate	S	S	M	U	U	U	U
n-Pentanol	S	S	S	M	S	S	M
n-Propanol	S	S	S	U	S	S	U
Naphthalene, 100%	S	S	U	U	U	M	U
Nickel Chloride	S	S	S	S	S	S	S
Nickel Salts	S	S	S	S	S	S	S
Nickel Sulfate	S	S	S	S	S	S	S
Nitric Acid, 10%	S	S	S1	S	S	S	M
Nitric Acid, 30%	S	S	S1	M	M	S	M
Nitric Acid, 50%	S	S	S1	U	U	M	U
Nitric Acid, 60%	S	M	U	U	U	U	U
Nitric Acid, 70%	S	M	U	U	U	U	U
Nitric Acid, 95%	S	M	U	U	U	U	U
Nitric Acid, Concentrated (70%)	S	M	U	U	U	U	U
Nitric Acid, fuming	S	U	U	U	U	U	U
Nitrobenzene	S	S	U	U	U	M	U
Oil, Cottonseed	S	–	S	M	M	S	U
Oil, Linseed	S	S	M	U	M	M	U
Oil, Mineral	S	S	M	U	U	U	U
Oil, Other	S	S	M	U	U	U	U
Oil, Paraffin	S	S	M	U	U	U	U
Oil, Petroleum	S	S	M	U	U	U	U
Oil, Silicone	S	S	S	M	S	M	M
Oil, Vegetable	S	–	S	M	M	S	M

Centrifuge Ware Chemical Resistance

	Teflon® (FEP)	Tefzel® (ETFE)	Polypropylene Copolymer (PPCO)	Polycarbonate (PC)	Polyethylene (PE)	Polypropylene (PP)	Polysulfone (PSF)
Oleic Acid	S	S	S	M	M	S	M
Oxalic Acid, 50%	S	S	S	M	S	S	S
Oxalic Acid	S	S	S	M	S	S	S
Oxygen	S	S	S	S	S	S	S
Palmitic Acid	S	S	S	—	S	S	—
Paraffin, White	S	S	M	M	S	M	—
Paraffin	S	S	M	M	S	M	—
Perchloric Acid, 10%	S	S	S	U	M	S	U
Perchloric Acid, 70%	S	M	M	U	U	M	U
Perchloric Acid, Concentrated (70%)	S	M	M	U	U	M	U
Petroleum Ether	S	M	U	U	U	U	U
Petrol	S	S	U	U	U	U	U
Phenol, 5%	S	S	M	U	M	M	U
Phenol, 50%	S	M	U	U	U	U	U
Phenol, Liquified, 92%	S	U	U	U	U	U	U
Phenol	S	U	U	U	U	M	U
Phosphoric Acid, 10%	S	S	S	S	S	S	S
Phosphoric Acid, 25%	S	S	S	M	S	S	S
Phosphoric Acid, 30%	S	S	S	U	S	S	S
Phosphoric Acid, 50%	S	S	S	U	S	S	S
Phosphoric Acid, 85%	S	S	S	U	U	S	S
Phosphoric Acid, 95%	S	S	M	U	U	S	S
Phosphoric Acid, Concentrated (88%)	S	S	S	U	U	S	S
Phosphate Trichloride	S	S	U	U	U	U	—
Picric Acid	S	S	M	U	M	M	U
Potassium Acetate	S	S	S	S	S	S	S
Potassium Bromide	S	S	S	S	S	S	S
Potassium Carbonate, saturated	S	S	M	U	S	S	M
Potassium Carbonate	S	S	M	U	S	S	M
Potassium Chlorate	S	S	S	U	M	S	U
Potassium Chloride, saturated	S	S	S	S	S	S	S
Potassium Chloride	S	S	S	S	S	S	S
Potassium Hydroxide, 5%	S	S	S	U	S	S	M
Potassium Hydroxide, 10%	S	S	S	U	S	S	M
Potassium Hydroxide, 45%	S	S	S	U	S	S	U
Potassium Hydroxide, Concentrated (50%)	S	S	S	U	S	S	U
Potassium Iodide	S	S	S	—	S2	S	S
Potassium Permanganate	S	S	S1	S	S	S2	S1
Potassium Sulfate	S	S	S	S2	S	S	S
Propane	S	S	M	U	U	U	M
Pyridine, 5%	S	S	M	U	U	M	M
Pyridine, 50%	S	M	M	U	U	M	U
Pyridine	S	M	U	U	U	M	U
Rubidium Bromide	S	S	S	S	S	S	S
Rubidium Chloride	S	S	S	S	S	S	S
Sera	S	S	S	S	S	S	S
Silver Cyanide	S	S	S	S	S	S	S
Silver Nitrate	S	S	S	S	S	S	S
Sodium Bicarbonate	S	S	S	S	S	S	S
Sodium Bisulfate	S	S	S	S	S	S	—
Sodium Borate	S	S	S	S	S	S	S
Sodium Bromide	S	S	S	S	S	S	S
Sodium Carbonate, 2%	S	S	S	M	S	S1	S
Sodium Carbonate	S	S	S1	M	M	S1	M
Sodium Chlorate	S	S	S	S	S	S	S
Sodium Chloride, 10%	S	S	S	S	S	S	S
Sodium Chloride, Saturated (36%)	S	S	S	S	S	S	S
Sodium Cyanide	S	S	S	—	S	S	S
Sodium Dichromate	S	S	S	M	S	S	S
Sodium Dodecyl Sulfate (SDS)	S	M	S	S	U	S	S
Sodium Hydroxide, 1%	S	S	S	M	S	S	S
Sodium Hydroxide, 10%	S	S	S	U	M	S	M

	Teflon® (FEP)	Tefzel® (ETFE)	Polypropylene Copolymer (PPCO)	Polycarbonate (PC)	Polyethylene (PE)	Polypropylene (PP)	Polysulfone (PSF)
Sodium Hydroxide, <01%	S	S	S	M	S	S	S
Sodium Hydroxide, >1%	S	S	S	U	M	S	M
Sodium Hydroxide, Concentrated (50%)	S	S	S	U	U	S	U
Sodium Hypochlorite, 5%	S	S	S1	S	M	S	S
Sodium Hypochlorite	S	S	M	M	M	M	S
Sodium Iodide	S	S	S	S	S	S	S
Sodium Metaborate	S	S	S	U	U	S	U
Sodium Nitrate, 10%	S	S	S	S	S	S	S
Sodium Nitrate	S	S	S	S	S	S	S
Sodium Perborate	S	S	M	—	U	M	—
Sodium Peroxide	S	S	M	S	U	M	—
Sodium Phosphate	S	S	S	M	S	S	S
Sodium Silicate	S	S	S	U	S	S	U
Sodium Sulfate	S	S	S	S	S	S	S
Sodium Sulfide	S	S	S	U	S	S	U
Sodium Sulfite	S	S	S	S	S	S	S
Sodium Thiosulfate	S	S	S	M	S	S	S
Solution 555, 20%	S	S	S	S	S	S	S
Stearic Acid	S	S	S	S	M	S2	S
Sucrose, Alkaline	S	S	S	U	S	S	M
Sucrose	S	S	S	S	S	S	S
Sulfosalicylic Acid	S	S	S	S	S	S	S
Sulfur Chloride	S	S	U	U	U	U	—
Sulfur Dioxide	S	S	S2	M	S2	S2	M
Sulfuric Acid, 10%	S	S	S	M	S	S	S1
Sulfuric Acid, 50%	S	S	S	U	S	M	S2
Sulfuric Acid, 60%	S	S	M	U	M	U	M
Sulfuric Acid, 75%	S	S	M	U	M	M	M
Sulfuric Acid, Concentrated (96%)	S	S	M	U	U	M	U
Sulfuric Acid, fuming	S	M	U	U	U	U	U
Tannic Acid	S	S	S	S	M	S	S
Tartaric Acid	S	S	S2	S	M	S	S
Tetrahydrofuran (THF)	S	S	U	U	U	U	U
Tetralin	S	S	U	U	U	U	U
Toluene	S	S	U	U	U	U	U
Trichloracetic Acid (TCA), 10%	S	S	S	S	S2	S	M
Trichloroacetic Acid (TCA)	S	M	S	M	S2	S	U
Trichloroethane	S	S	U	U	U	U	U
Trichloroethylene	S	S	U	U	U	U	U
Triethanolamine	S	S	S	U	S2	M	U
Tris Buffer, neutral pH	S	S	S	S	S	S	S
Trisodium Phosphate (TSP)	S	S	S	U	S	S	U
Triton X-100	S	M	S	U	S	S	U
Turpentine	S	S	U	U	U	U	U
Urea	S	S	S	S	S	S	S
Urine	S	S	S	S	S	S	S
Water, Distilled	S	S	S	S	S	S	S
White Spirits	S	S	U	U	U	U	U
Xylene	S	S	U	U	U	U	U
Zephiran Chloride, 1%	S	S	S	S	S	S	S
Zephiran Chloride, 7%	S	S	S	M	S	S	M
Zinc Chloride	S	S	S	S	S	S	S
Zinc Sulfate	S	S	S	S	S	S	S

Key:

S = Satisfactory

S1 = Satisfactory, may cause discoloration.

S2 = Satisfactory below 26°C only

M = Marginal; may be satisfactory for use in a centrifuge, depending on length of exposure and speed. Testing under operating conditions is suggested before actual run.

U = Unsatisfactory; not recommended.

U1 = WARNING/EXPLOSION HAZARD! To prevent the possibility of personal injury, do not use any chemical rated "U1" with an aluminum closure. In case of rotor failure, these chemicals can react with aluminum to cause an explosion.

— = No assurance of performance; a trial run should be made to determine suitability for a specific application.

NALGENE® Test Tube Rack Cross Reference Chart

Nom. Vol., ml	Tube Cat. Number	Description	Nom. Dim., Dia. x Ht., mm	Material	Rack Cat. No.
15	3103-0015	Conical	16.9 x 118.9	PPCO	5970-0016
50	3103-0050	Conical	28.6 x 133.4	PPCO	5930-0030
50	3105-0050	Conical	28.9 x 134.5	PC	5930-0030
15	3105-0015	Conical	16.9 x 120.2	PC	5970-0016
12	3110-0120	Round	15.9 x 103.0	PPCO	5970-0016
15	3110-0150	Round	15.9 x 113.9	PPCO	5970-0016
16	3110-0160	Round	18.0 x 99.3	PPCO	5930-0025
38	3110-0380	Round	25.4 x 89.1	PPCO	5930-0025
50	3110-0500	Round	28.7 x 103.3	PPCO	5930-0030
100	3110-1000	Round with lip	31.8 x 164.1	PPCO	5970-0030
50	3110-9500	Round with lip	28.7 x 104.2	PPCO	5930-0030
50	DS3112-0050	Round with lip	28.7 x 101.1	LDPE	5930-0030
10	3114-0010	Oak Ridge	16.0 x 81.5	FEP	5970-0016
30	3114-0030	Oak Ridge	25.7 x 93.7	FEP	5930-0025
50	3114-0050	Oak Ridge	28.8 x 107.7	FEP	5930-0030
10	3115-0010	Oak Ridge	16.0 x 82.0	PSF	5970-0016
30	3115-0030	Oak Ridge	25.7 x 94.5	PSF	5930-0025
50	3115-0050	Oak Ridge	29.0 x 107.7	PSF	5930-0030
12	3117-0120	Round	16.0 x 103.5	PC	5970-0016
15	3117-0150	Round	16.1 x 114.3	PC	5970-0016
16	3117-0160	Round	18.1 x 100.6	PC	5930-0025
38	3117-0380	Round	25.5 x 89.4	PC	5930-0025
50	3117-0500	Round	29.3 x 103.8	PC	5930-0030
100	3117-1000	Round with lip	31.8 x 165.1	PC	5970-0030
50	3117-9500	Round with lip	28.7 x 106.4	PC	5930-0030
10	3118-0010	Oak Ridge	16.1 x 81.7	PC	5970-0016
28	3118-0028	Oak Ridge	25.4 x 101.8	PC	5930-0025
30	3118-0030	Oak Ridge	25.7 x 94.3	PC	5930-0025
50	3118-0050	Oak Ridge	28.8 x107.0	PC	5930-0030
85	3118-0085	Oak Ridge	38.2 x 105.7	PC	—
10	3119-0010	Oak Ridge	16.0 x 81.4	PPCO	5970-0016
28	3119-0028	Oak Ridge	25.4 x 101.9	PPCO	5930-0025
30	3119-0030	Oak Ridge	25.5 x 94.3	PPCO	5930-0025
50	3119-0050	Oak Ridge	28.8 x 106.7	PPCO	5930-0030
10	3137-0010	Oak Ridge	16.1 x 82.8	PSF	5970-0016
30	3137-0030	Oak Ridge	25.7 x 101.6	PSF	5930-0025
50	3137-0050	Oak Ridge	29.0 x 115.3	PSF	5930-0030
10	3138-0010	Oak Ridge	16.1 x 82.3	PC	5970-0016
16	3138-0016	Oak Ridge	18.2 x 106.9	PC	5930-0025
30	3138-0030	Oak Ridge	25.7 x 101.6	PC	5930-0025
50	3138-0050	Oak Ridge	28.8 x 115.0	PC	5930-0030
10	3139-0010	Oak Ridge	16.0 x 82.0	PPCO	5970-0016
16	3139-0016	Oak Ridge	17.9 x 106.6	PPCO	5930-0025
30	3139-0030	Oak Ridge	25.5 x 101.4	PPCO	5930-0025
50	3139-0050	Oak Ridge	28.8 x 114.1	PPCO	5930-0030
35	3146-0050	Conical Oak Ridge	28.8 x 114.1	PC	5930-0025
35	3148-0050	Conical Oak Ridge	28.6 x 113.8	PPCO	5930-0025

Containers With Cover

7142 Large, Round Containers with Cover, high-density polyethylene

Handy containers for storing and transporting dry and solid material, specimens and general lab supplies. Positive-lock lids assure a tight seal. Easy-grip handles. Stackable. National Sanitation Foundation (NSF)-approved for food and beverage storage.

Cat. No.7142	-0015	-0020	-0030
Cap., L (nom.)	15	20	30
Cap., gal. (nom.)	4	5.3	8
Dia. x Ht., mm	305 x 240	305 x 380	390 x 305
Dia. x Ht., in.	12 x 9-1/2	12 x 15	15-1/2 x 12
No. per Pkg	1	1	1
No. per Case	6	6	6

7150 Large Containers with Cover, high-density polyethylene

For storing and transporting powders and solids. Friction fit lid. Stackable.

Cat. No.7150	-0030
Cap., L (nom.)	30
Cap., gal. (nom.)	8
L x W x H, mm	300 x 300 x 450
L x W x H, in.	12 x 12 x 17-5/8
No. per Pkg	1
No. per Case	6

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6920 Large Waste Containers with Cover, polypropylene

Heavy-duty containers ideal for holding and sterilizing refuse, equipment, labware, contaminated material. Friction fit closure. Meet OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. Cover must be removed before autoclaving. Molded-in handgrips.

Autoclavable/Biohazard

Cat. No.6920	-0060	-0120
Nom. Cap., L	23	45
Nom. Cap., Gal.	6	12
Dim. (O.D. x Height), mm	279 x 457	356 x 584
Dim. (O.D. x Height), in.	11 x 18	14 x 23
No. per Pkg	1	1
No. per Case	4	4

Cryoware

WARNING! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ tubing. Such use may cause entrapment of liquefied nitrogen inside the vial and lead to pressure build-up resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the NALGENE Cryopreservation Manual when handling and disposing of vials. Request Lit. No. 10096 or download a copy from www.NALGENElabware.com/techdata/technical/manual.asp.

5000 Sterile Cryogenic Vials, polypropylene; high-density polyethylene closure

Externally-threaded vial for aseptic technique. Basic design is similar to linerless closures used on NALGENE bottles and carboys – a sealing ring in conjunction with specially designed threads. White marking area, fill line and graduations printed on vial. Radiation-sterilized, non-cytotoxic and non-pyrogenic. RNAse/DNAse-Free. Self-standing. 25/bag. (Cat. No. 5000-0050 packed 10/bag.) Now available bar coded (See Cat. No. 5001-series). **Certified/Sterile/Graduated/CE/RNAse DNAse Free**

Cat. No.5000	-0012	-0020	-0050
Cap., ml	1.2	2.0	5.0
O.D., mm	13.5	13.5	13.5
O.D., in.	1/2	1/2	1/2
Height, mm	38.1	48.3	92
Height, in.	1-1/2	1-7/8	3-1/2
No. per Case	500	500	250

This product is in compliance to Directive 98/79/EC of the European Parliment and the Council of 27 October 1998 on in vitro diagnostic medical devices.

5012 Bulk-packed Sterile Cryogenic Vials, polypropylene; high-density polyethylene closure

Economy version of Cat. Nos. 5000-0012 and -0020 with printing and graduations. Closures are assembled on vials. Radiation-sterilized. Non-cytotoxic and non-pyrogenic. RNAse/DNAse free 1000/bag. **Certified/Sterile/Graduated/CE/RNAse DNAse Free**

Cat. No.5012	-0012	-0020
Cap., ml	1.2	2.0
O.D., mm	13.5	13.5
O.D., in.	1/2	1/2
Height, mm	38.1	48.3
Height, in.	1-1/2	1-7/8
No. per Case	1000	1000

This product is in compliance to Directive 98/79/EC of the European Parliment and the Council of 27 October 1998 on in vitro diagnostic medical devices.

WARNING! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ tubing. Such use may cause entrapment of liquefied nitrogen inside the vial and lead to pressure build-up resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the NALGENE Cryopreservation Manual when handling and disposing of vials. Request Lit. No. 10096 or download a copy from www.NALGENElabware.com/techdata/technical/manual.asp.

5011 Bulk-packed Non-sterile Cryogenic Vials, polypropylene; high-density polyethylene closure

Economical, non-sterile version of Cat. Nos. 5000-0012 and -0020 without printing or graduations. Closures and vials are packed separately. Do not autoclave. These vials are for research use only; not for *in vitro* diagnosis or parenterals. 1000/bag.

Cat. No.5011	-0012	-0020
Cap., ml	1.2	2.0
O.D., mm	13.5	13.5
O.D., in.	1/2	1/2
Height, mm	38.1	48.3
Height, in.	1-1/2	1-7/8
No. per Case	1000	1000

5005 Sterile Specimen Cryogenic Vial with Screw Closure, polypropylene; high-density polyethylene closure

Designed for storage of solid specimens. For use in mechanical freezers only. Wide-mouth, shoulderless vial allows easy access to sample with forceps. Linerless closure. Packaged 5 vials per easy open bag. Certified non-cytotoxic and non-pyrogenic. **Certified/Sterile/CE**

Cat. No.5005	-0015
Cap., ml	15
O.D., mm	33
O.D., in.	1-5/16
Height With Closure, mm	47
Height With Closure, in.	1-13/16
No. per Case	75

This product is in compliance to Directive 98/79/EC of the European Parliment and the Council of 27 October 1998 on in vitro diagnostic medical devices.

5001 Cryogenic Vials with Bar Code, polypropylene, high-density polyethylene or polypropylene, silicone gasket

NALGENE 1.2, 2.0 and 5.0mL standard and 1.5mL SYSTEM100™ cryogenic vials with bar code are ideal for automated data collection, sample inventory or to mask the identity of samples. Code 128-numeric barcode is printed in black on white background. Human readable is printed below bar code. Guaranteed to have no duplicate numbers. Barcodes are resistant to isopropyl alcohol, 100% butanol, 10-20% DMSO, 5% bleach, 10% acetic and hydrochloric acids and 10% NaOH. Certified sterile, noncytotoxic and nonpyrogenic. Cryogenic vials are packed in easy-open bags inside cases with easy access top opening. Contact NALGENE customer service for information on custom barcodes. RNAse/DNAse free. **Sterile/Certified/CE/RNAse DNAse Free**

Cat. No.	Cap., ml	O.D., mm	O.D., in.	Height, mm	Height, in.	No. per Case	No. per Pkg
5001-0012	1.2	13.5	0.5	38.1	1.50	500	25
5001-0020	2	13.5	0.5	48.3	1.88	500	25
5001-0050	5	13.5	0.5	92	3.50	250	10
5001-1020	1.5	12	15/32	48	1.88	500	25

This product is in compliance to Directive 98/79/EC of the European Parliment and the Council of 27 October 1998 on in vitro diagnostic medical devices.

5000 Sterile SYSTEM 100™ Cryogenic Vials, polypropylene; polypropylene closure; silicone gasket

NALGENE System 100 Cryoware will help you save money and freezer space by increasing storage capacity by 23 percent over 81-place boxes. The system consists of two sizes of gasketed vials that can be centrifuged up to 8000 x g, a storage box that holds 100 vials (Cat. No. 5026-1010).

System 100 is the only system that allows the storage of externally-threaded vials in a 100-place CryoBox.

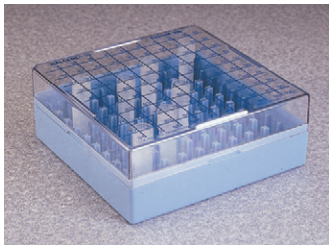
Innovative vials increase storage capacity in mechanical and vapor-phase (LN_2) freezers. Gasketed closure ensures leakproof performance in a microcentrifuge (up to 8000 x g) and during shipment. Externally threaded vials for aseptic technique. White marking area, graduations and fill line printed on vials. Radiation sterilized. Non-cytotoxic and non-pyrogenic. RNAse/DNAse free. Meets Dangerous Goods Regulations for the transport of infectious and diagnostic specimens. Self-standing. Packaged 25/bag. 1.5ml size now available bar coded (5001-1020). **Certified/Sterile/Graduated/Leakproof/CE/RNAse DNAse Free**

Cat. No.5000	-1012	-1020
Cap., ml	1.0	1.5
O.D., mm	12	12
O.D., in.	15/32	15/32
Ht., mm	38	48
Ht., in.	1-1/2	1-7/8
No. per Case	500	500

CAUTION: Do not centrifuge SYSTEM 100 cryogenic vials above 8,000 x g. Centrifugation of these vials above the recommended force will cause tube failure and possible sample loss. Balance the vials in the rotor properly. Check for proper fit in the rotor. Make a test run with water at designated speed to assure performance.

This product is in compliance to Directive 98/79/EC of the European Parliment and the Council of 27 October 1998 on in vitro diagnostic medical devices.

5026 SYSTEM 100™ CryoBox for 100 vials, polycarbonate



Designed for ultralow temperature storage of one hundred SYSTEM 100 cryogenic vials (Cat. Nos. 5000-1012, -1020, & 5001-1020) or other similar size, externally-threaded vials and most internally-threaded vials. Increases freezer storage capacity by 23 percent over boxes that hold 81 vials. Usable temperature range of -196°C to +121°C. Transparent lid has printed grid for inventory purposes, permits viewing of contents and is keyed to prevent misalignment. Autoclavable. **Autoclavable**

Cat. No.5026	-1010
Array	10 x 10
L x W x H, mm	133 x 133 x 52
L x W x H, in.	5-1/4 x 5-1/4 x 2-1/16
No. per Case	10

WARNING! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ tubing. Such use may cause entrapment of liquefied nitrogen inside the vial and lead to pressure build-up resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the NALGENE Cryopreservation Manual when handling and disposing of vials. Request Lit. No. 10096 or download a copy from www.NALGENElabware.com/techdata/technical/manual.asp.

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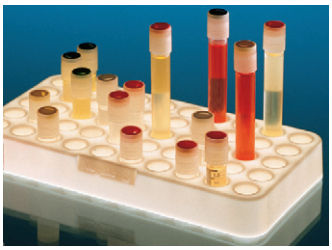
5030 25-Place Cryogenic Vial Holder, blue polycarbonate

Allows single-handed vial manipulation. Bottom of each well interlocks with base of vial. Spacing around each hole is greater than in Cat. No. 5030-0510 to grasp vials easily. Holes are staggered for viewing vial contents. Accepts all NALGENE cryogenic vials, except Cat. No. 5005-0015. Autoclavable.
Autoclavable

Cat. No.5030	-0505
L x W x H, mm	197 x 102 x 22
L x W x H, in.	7-3/4 x 4 x 7/8
No. of Cryogenic Vials Held	25
No. per Pkg	1
No. per Case	4



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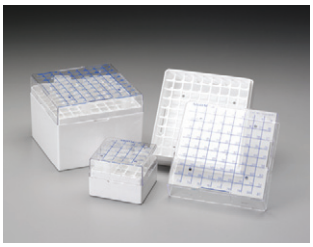
5030 50-Place Cryogenic Vial Holder, white polycarbonate

Allows single-handed vial manipulation. Bottom of each well interlocks with base of vial. Accommodates up to 50 vials in a 5 x 10 array. Accepts all NALGENE cryogenic vials except Cat. No. 5005-0015. Autoclavable. **Autoclavable**

Cat. No.5030	-0510
L x W x H, mm	197 x 102 x 28
L x W x H, in.	7-7/8 x 4-1/8 x 1
No. per Pkg	1
No. per Case	4

5025, 5026, 5027 CryoBoxes™ for 25 and 81 vials, polycarbonate



For ultra-low temperature storage of both internally-and externally-threaded 1.2-, 2.0- and 5.0-ml cryogenic vials. Durable, economical alternatives to flimsy cardboard. Usable temperature range of -196°C to +121°C. Transparent lids have printed grid for inventory purposes, permit viewing of contents and are keyed to prevent misalignment. Boxes accept writing with markers designed for ultra-low temperatures, such as NALGENE Cryoware markers, Cat. No. 6313. Unique 5 x 5 array for 1.2-/2.0-ml cryogenic vials. Creates small, space-efficient storage system within a large mechanical freezer. Useful as sturdy, reusable mailers for vials. Autoclavable. **Autoclavable**

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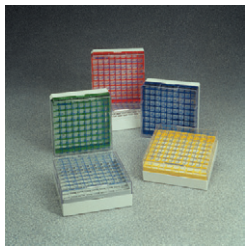
EARN

Cat. No.	-5025-0505	-5026-0909	-5027-0909
Array	5 x 5	9 x 9	9 x 9
Accommodate Vial Size, ml	1.2 and 2.0	1.2 and 2.0	5.0
L x W x H, mm	76 x 76 x 52	133 x 133 x 52	133 x 133 x 95
L x W x H, in.	3 x 3 x 2	5-1/4 x 5-1/4 x 2	5-1/4 x 5-1/4 x 3-3/4
No. per Pkg	8	4	4
No. per Case	48	24	24

867013 Colored CryoBoxes, polycarbonate



Five grid colors for easy-to-identify inventory management provide safe and economical storage of up to 81 cryogenic samples. Identical in construction to NALGENE white CryoBox (Cat. No. 5026-0909), these colored boxes hold 1.0- to 2.0-ml cryogenic storage vials in a 9 x 9 array. Dimensions (L x W x H) are 133 x 133 x 52mm (5-1/2 x 51/4 x 2 in.). Usable temperature range is –196° C to +121° C. Colors match popular NALGENE cryogenic vial color coders. Transparent lid allows easy viewing of contents. Lids have numbered grid for quick sample identification. Assortment pack offers low-cost start up option: 4 each - red, yellow, green, blue, gray, white. **Autoclavable**

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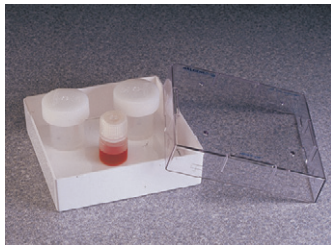
Cat. No.867013	-0240	-0241	-0242	-0243	-0244	-0245
Color	Red	Yellow	Green	Blue	Gray	Assorted (4 each color and 4 white)
No. per Pkg	4	4	4	4	4	4
No. per Case	24	24	24	24	24	24

5050 Storage Box, polycarbonate



Sturdy box with transparent lid for storage of various sizes of vials, bottles and bags in storage areas, refrigerators and mechanical freezers (-196°C to +121°C). Be sure to verify the temperature resistance of any stored material. **Autoclavable**

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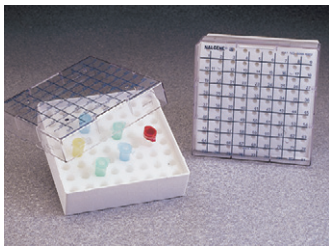
Cat. No.5050	-0001
L x W x H, mm	133 x 133 x 52
L x W x H, in.	5-1/4 x 5-1/4 x 2
No. per Pkg	4
No. per Case	24

5055 Microcentrifuge Tube Boxes for 64 and 81 tubes, polycarbonate



Provide storage of microcentrifuge tubes from -150°C to +121°C (not for use in liquid-phase liquid nitrogen). Transparent lid has printed grid for inventory purposes, permits viewing of contents, and is keyed in one position to prevent misalignment. Lid accepts writing with marker for box and tube identification. Autoclavable. **Autoclavable**

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Cat. No.5055	-5002	-5005	-5015
L x W x H, mm	133 x 133 x 52	133 x 133 x 52	133 x 133 x 52
L x W x H, in.	5-1/4 x 5-1/4 x 2	5-1/4 x 5-1/4 x 2	5-1/4 x 5-1/4 x 2
Tube Size, ml	0.2	0.5	1.5
Box Cap. (tubes)	81	81	64
No. per Pkg	4	4	4
No. per Case	24	24	24

WARNING! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ tubing. Such use may cause entrapment of liquefied nitrogen inside the vial and lead to pressure build-up resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the NALGENE Cryopreservation Manual when handling and disposing of vials. Request Lit. No. 10096 or download a copy from www.NALGENElabware.com/techdata/technical/manual.asp.

DS5035 Vertical CryoBox Racks, stainless steel

Unique size rack to hold 5025-0505 (5 x 5, 1-2 ml vial) CryoBoxes. Innovative retainers hold each box securely but separately. Allow fast retrieval of one box and immediate return to rack.

Cat. No.DS5035	-0004	-0009
No. of Shelves	4	9
Accommodate NALGENE CryoBox Cat. Nos	5025-0505	5025-0505
W x D x H, cm	8.3 x 8.4 x 22.5	8.3 x 8.4 x 50.2
W x D x H, in.	3-1/4 x 3-3/8 x 8-3/4	3-1/4 x 3-3/8 x 19-3/4
No. per Case	1	1

5036 Vertical CryoBox Rack, stainless steel

Innovative retainers hold each box securely but separately. Allow fast retrieval of one box and immediate return to rack. Holds standard 1-2 ml cryoboxes.

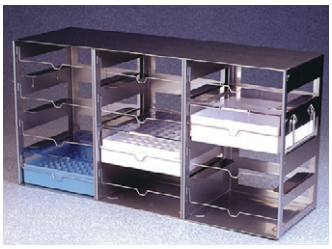
Cat. No.5036	-0004	-0009
No. of Shelves	4	9
Accommodate NALGENE CryoBox Cat. Nos	5050-0001, 5055-5002, 5055-5005, 5055-5015, 5026-0909, 5026-1010, 867013-series	5050-0001, 5055-5002, 5055-5005, 5055-5015, 5026-0909, 5026-1010, 867013-series
W x D x H, cm	14 x 14.3 x 22.5	14 x 14.3 x 50.2
W x D x H, in.	5-1/2 x 5-5/8 x 8-3/4	5-1/2 x 5-5/8 x 19-3/4
No. per Pkg	1	1
No. per Case	4	4

DS5037 Vertical CryoBox Rack, stainless steel

Innovative retainers hold each box securely but separately. Allow fast retrieval of one box and immediate return to rack. Holds 5027-0909 (9 x 9, 5 ml) NALGENE Cryobox and Mr. Frosty, Cat. 5100-0001.

Cat. No.DS5037	-0002	-0004	-0007
No. of Shelves	2	4	7
Accommodate NALGENE CryoBox Cat. Nos	5027-0909	5027-0909	5027-0909
W x D x H, cm	14 x 14.3 x 20.6	14 x 14.3 x 40.6	14 x 14.3 x 70.5
W x D x H, in.	5-1/2 x 5-5/8 x 8-1/4	5-1/2 x 5-5/8 x 16	5-1/2 x 5-5/8 x 27-3/4
No. per Case	1	1	1

5038 Horizontal CryoBox Racks, stainless steel



Horizontal racks fit most upright freezer compartments. Handles at both ends for freezers with right- or left-hand doors. Holds standard 1-2 ml cryoboxes.

Cat. No.5038	-4322	-4422
No. of Shelves	12	16
Array	4 x 3	4 x 4
Accommodate NALGENE CryoBox Cat. Nos	5026-0909, 5026-1010, 5050-0001, 5055-5002, 5055-5005, 5055-5015, 867013-series	5026-0909, 5026-1010, 5050-0001, 5055-5002, 5055-5005, 5055-5015, 867013-series
H x W x D, cm	22.5 x 14.3 x 44.4	22.5 x 14.3 x 59.0
H x W x D, in.	8-7/8 x 5-5/8 x 17-1/2	8-7/8 x 5-5/8 x 23-1/4
No. per Pkg	1	1
No. per Case	2	2

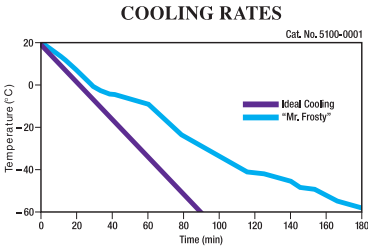
5039 Horizontal Racks for Multiwell Plates, stainless steel

Provide secure convenient storage and transport of samples in multiwell plates, deep-well plates and microtube racks. These sturdy racks are useful throughout life science and drug discovery laboratories for genome library storage, DNA and RNA libraries, storage of compounds for high throughput screening and short term or long term storage of compounds or microbes. Fits NUNC 1.0 ml Cryobank and Bank-It™ cryogenic storage vials. Horizontal rack design fits most refrigerators and freezers. Retainer clip on each compartment holds plates securely in place. Sturdy handles on top and sides for easy transport. Label holder for easy identification of contents of rack.

Cat. No.5039	-0048	-0072
No. of shelves	16	24
Array	4 x 4	4 x 6
W x D x H, cm	38.7 x 13.9 x 21.6	57.9 x 13.9 x 21.6
W x D x H, in.	15.2 x 5.5 x 8.5	22.8 x 5.5 x 8.5
No. per Case	1	1

5100 Cryo 1°C Freezing Container, "Mr. Frosty", polycarbonate; blue high-density polyethylene closure; white high-density polyethylene vial holder; foam insert

Provides the critical, repeatable -1°C/minute cooling rate required for successful cell cryopreservation and recovery. Requires only 100% isopropyl alcohol and mechanical freezer. Labeled with graphic, step-by-step instructions. Holds up to 18 vials. Holder prevents vials from contacting alcohol – no contamination by wicking; no removal of labels or printing on vials. Containers with alcohol can be stored at room temperature, saving freezer space.



Cat. No.5100	-0001
Closure Size, mm	120
H x Dia., mm	86 x 117
H x Dia., in.	3-7/16 x 4-5/8
Use with NALGENE Cryogenic Vials	1.0, 1.2, 1.5 and 2.0 ml
No. per Case	1

WARNING! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ tubing. Such use may cause entrapment of liquefied nitrogen inside the vial and lead to pressure build-up resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the NALGENE Cryopreservation Manual when handling and disposing of vials. Request Lit. No. 10096 or download a copy from www.NALGENElabware.com/techdata/technical/manual.asp.

DS5114 Quick Chill™ Unit, polycarbonate; non-toxic insulating solution, with handle

Rapidly and repeatedly chills biological samples to -20°C for use in molecular biology applications such as ethanol precipitation of DNA/RNA samples. The Quick Chill unit can be used repeatedly for up to 45 minutes, eliminating the inconvenience of dry ice/alcohol baths. Durable polycarbonate is pre-filled with a non-toxic insulating solution. Holds twelve 0.2- to 1.5-ml microcentrifuge tubes. There is no direct contact between the tubes and the insulating solution so labels and markings won't come off. Break-resistant, stackable design. Rubber feet keep the Quick Chill unit from sliding on the bench surface.

Performance with microcentrifuge tubes:

Sample, volume	Time* to reach -20°C (IPA**) or 0°C (water)
Water, 1.5 ml	3.2 min
Water, 0.5 ml	4.0 min
IPA, 1.5 ml	2.0 min
IPA, 0.5 ml	2.8 min
Cat. No.DS5114	**-0012**
No. of Inserts Included	16
Tube Array	3 x 4
L x W x H, mm	151 x 108 x 125
L x W x H, in.	5-5/16 x 4-1/4 x 4-15/16
Weight, lb.	1-1/2
Weight, kg	0.68
No. per Case	1

*Units at room temperature

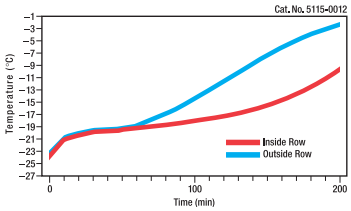
**Isopropanol

5115 -20°C Labtop Coolers, **blue polycarbonate lower section filled with a non-toxic gel; gel-filled white or non-filled clear polycarbonate lid with handle**

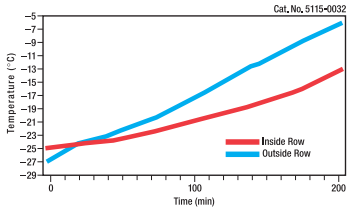
-0032 will maintain a temperature below -15°C for up to 2 hours; -0012 will maintain temperature for up to 1 hour. Coolers accommodate 0.2- to 2.0-ml microcentrifuge tubes and cryogenic vials. Sixteen inserts included convert 1.5-ml holes to accept 0.2 or 0.5-ml tubes

Cat. No.5115	-0012	-0032
Lid Type/Color	non-filled/clear	gel-filled/white
Tube Array	3 x 4	4 x 8
L x W x H, mm	151 x 108 x 125	243 x 157 x 146
L x W x H, in.	5-5/16 x 4-1/4 x 4-15/16	9-9/16 x 6-3/16 x 5-3/4
Weight, lb.	1-1/2	4-1/2
Weight, kg	0.68	2.04
No. per Case	1	1

LABTOP COOLER, JR. PERFORMANCE
1.5ml Microcentrifuge Tubes



LABTOP COOLER PERFORMANCE
1.5ml Microcentrifuge Tubes

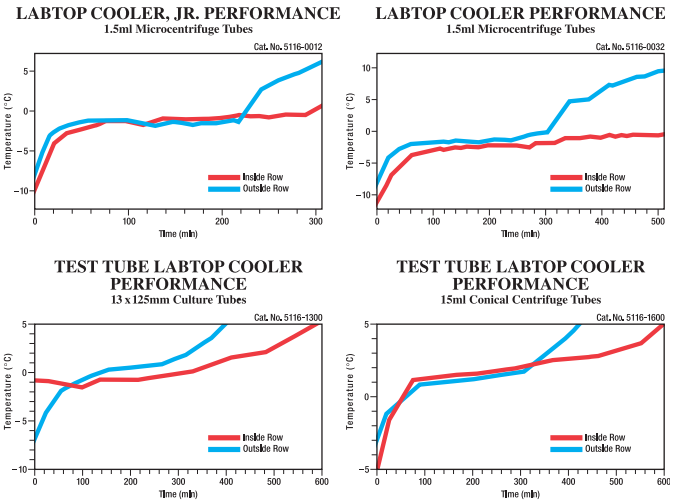


WARNING! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ tubing. Such use may cause entrapment of liquefied nitrogen inside the vial and lead to pressure build-up resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the NALGENE Cryopreservation Manual when handling and disposing of vials. Request Lit. No. 10096 or download a copy from www.NALGENElabware.com/techdata/technical/manual.asp.

DS5116 0°C Labtop Coolers and Test Tube Coolers, green polycarbonate lower section filled with a non-toxic gel; gel-filled white or non-filled clear polycarbonate lid with handle

0°C coolers replace messy ice baths. -0032 will maintain a temperature below 1°C for up to 5 hours; -0012 will maintain temperature for up to 3-1/2 hours. Both are supplied with sixteen inserts to convert 1.5-ml holes to accept 0.2- to 0.5-ml microcentrifuge tubes. Both -1300 and -1600 will maintain temperature for up to 5 hours (no inserts). Excellent for transporting samples in Vacutainers* in hospitals and clinics. Coolers accommodate tube height up to 125 mm when lid is latched. DS5116 -0012 and -0032 accommodate cryogenic vials and 0.2- to 2.0-ml microcentrifuge tubes; 5116-1300 accommodates 12-13 mm diameter tubes. 5116-1600 accommodates 16-17 mm diameter tubes.

Cat. No.DS5116	-0012	-0032
Lid Type/Color	non-filled/clear	gel-filled/white
Tube Array	3 x 4	4 x 8
L x W x H, mm	151 x 108 x 125	243 x 157 x 146
L x W x H, in.	5-5/16 x 4-1/4 x 4-15/16	9-9/16 x 6-3/16 x 5-3/4
Weight, lb.	1-1/2	4-1/2
Weight, kg	0.68	2.04
No. per Case	1	1
Cat. No.5116	**-1300**	**-1600**
Lid Type/Color	non-filled/clear	non-filled/clear
Tube Array	3 x 4	3 x 4
L x W x H, mm	197 x 140 x 190	197 x 140 x 190
L x W x H, in.	7-3/4 x 5-1/2 x 7-1/2	7-3/4 x 5-1/2 x 7-1/2
Weight, lb.	3-1/2	3-1/2
Weight, kg	1.59	1.59
No. per Case	1	1



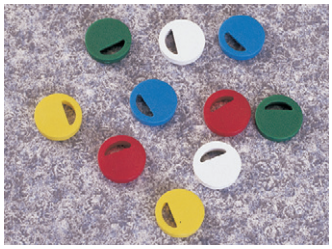
*Vacutainer is a registered trademark of Becton Dickinson.

4150 Dewar Flasks, high-density polyethylene; high-density polyethylene cover; polyethylene-coated handle

Shatterproof. For short-term storage of ice water, dry ice-solvent and liquid nitrogen. Chemical-resistant HDPE double walls are filled with CFC-free urethane foam and withstand temperatures from -196°C to +100°C. Vented, insulated cover. All sizes feature molded-in ribs, cover securing tabs, pour spout, and bottom grip area for added safety. Convenient bail-type handle.

Cat. No.4150	-1000	-2000	-4000	-9000
Cap., L	1	2	4	10
I.D. at mouth, mm	96	122	158	198
I.D. at mouth, in.	3.8	4.8	6.2	7.8
Inside Depth, mm	195	231	295	396
Inside Depth, in.	7.7	9.1	11.6	15.6
Overall Height, mm	251	282	353	470
Overall Height, in.	9.9	11.1	13.9	18.5
No. per Pkg	1	1	1	–
No. per Case	4	2	2	1

5045 Cryogenic Vial Closure Color Coders, polystyrene



Coders fit into top of NALGENE cryogenic vial closures (except Cat. No. 5005-0015). Provide quick visual identification of specific vials to simplify inventory maintenance.

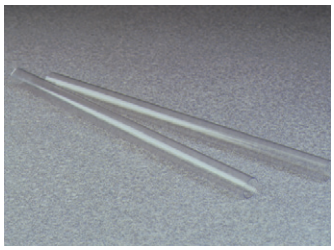
Cat. No.5045	-0000	-0002	-0003	-0004	-0005
Color	White	Yellow	Blue	Green	Red
No. per Pkg	100	100	100	100	100
No. per Case	500	500	500	500	500

5015 CryoCane™, aluminum

Cat. No. 5015-0001 holds five vials. Cat. No. 5015-0002 holds six vials. Identify canes with CryoCane coders (Cat. No. 5020). NALGENE CryoSleeves (Cat. No. 5016) protect canes and vials during handling and storage.

Cat. No.5015	-0001	-0002
For Use With NALGENE Cryogenic Vials, Cap., ml	1.0, 1.2, 1.5 and 2.0	1.0, 1.2, 1.5, 2.0 and 5.0
Length, mm	290	300
Length, in.	11-5/16	11-13/16
No. per Pkg	12	12
No. per Case	48	48

5016 CryoSleeve™, polyvinyl chloride



Clear plastic sleeve encloses a NALGENE CryoCane for extra security during handling and storage. Direct replacement for cardboard sleeve. Allows quick location of empty spaces in the cane and easy identification of a particular vial or vials without removing the sleeve. Will not become brittle while frozen.

Cat. No.5016	-0001
Length, mm	273
Length, in.	10-13/16
No. per Case	100

WARNING! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen unless correctly sealed in Nunc CryoFlex™ tubing. Such use may cause entrapment of liquefied nitrogen inside the vial and lead to pressure build-up resulting in possible explosion or biohazard release. Use appropriate safety procedures as outlined in the NALGENE Cryopreservation Manual when handling and disposing of vials. Request Lit. No. 10096 or download a copy from www.NALGENElabware.com/techdata/technical/manual.asp.

DS5020 CryoCane™ Coders, aluminum

Unique, colorful tabs keep track of your inventory of NALGENE CryoCanes. Identify a particular batch of vials or a specific technician's work. Remain firmly in place during storage in liquid-nitrogen freezers.

Cat. No.DS5020	-0000	-0002	-0003	-0004	-0005
Color	White	Yellow	Blue	Green	Red
No. per Case	100	100	100	100	100

5040 Cryoware Labels

Specifically designed for use at ultra-low temperatures. Cloth labels adhere to plastic and cardboard cryogenic storage boxes. Will not peel or shrink. Accept ballpoint pen. Ten sheets of labels. Twenty labels per sheet. Not printer compatable.

Cat. No.5040	-0002
Label Dim., mm	25 x 50
Label Dim., in.	1 x 2
No. per Pkg	200
No. per Case	2000

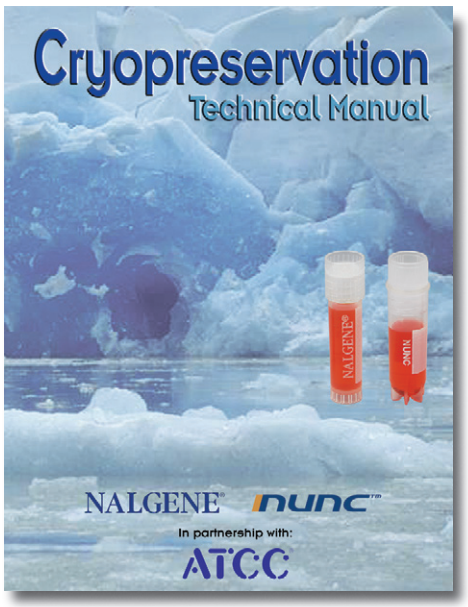
6313 Cryoware Marker Set

For marking cardboard and polycarbonate. Ink will not fade at ultra-low temperatures. Smudge-proof. Not alcohol resistant. Package consists of four extra-fine-point pens.

Cat. No.6313	-0010	-0020
Color	1 ea., Red, Green, Blue, Black	Black Only
No. per Pkg	4	4
No. per Case	24	24

NALGENE® Cryopreservation Manual

Call 800-276-2543 for your free NALGENE® Cryopreservation Manual - a guide for preparing and storing cells at cryogenic temperatures. Written in cooperation with the American Type Culture Collection (ATCC). Ask for literature number L10096. Or download the manual from our website: www.NALGENElabware.com/techdata/technical/manual.asp



Manual topics include:

- Seed Lot System
- Cryoprotective Agents
- Preparation of Cells
- Rate of Cooling
- Storage
- Reconstitution (Thawing)
- Determination of Recovered Cells
- Inventory Control
- Safety Considerations
- Selected References

NALGENE® Cryoware Literature

Everything You Need To Protect Your Most Valuable Samples

Call 800-276-2543 and ask for literature number L50002. A concise collection of the latest NALGENE® and NUNC cryogenic storage vials and accessories. Complete with NALGENE and NUNC compatibility charts so you can conveniently mix and match vials and assessories that work together.

Thermo Scientific ultra-low temperature (ULT) freezers are designed to store and protect critical samples. These freezers combine robust refrigeration systems with advanced electronic controls to ensure that valuable samples are stored safely and securely. For more information, visit www.thermo.com/freezer.

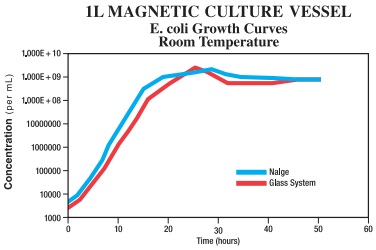
Culture Vessels

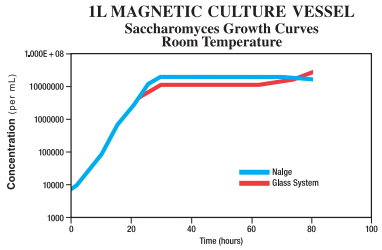
A USP VI

2605 Magnetic Culture Vessel, polycarbonate; polypropylene closures; Teflon* TFE stir bar; polypropylene/TFE stirring assembly

Specially designed for efficient top-to-bottom mixing at low speed and low shear. This lightweight, break-resistant 1-liter culture vessel is excellent for use on a magnetic stir plate for small-volume scale-up applications. Two magnetic stir bars are included: small (bacteria) and large (mammalian cells). Features two shoulder access ports. Impeller height is adjustable. **Autoclavable/USPVI/Transparent/Graduated**

Cat. No.2605	-0001
Brim Cap., L	2.2
Working Cap., L	1
Closure Diameter, Top	63 mm
Closure Diameter, side	38-430
Overall Height x O.D., mm	266 x 137
Overall Height x O.D., in.	10-1/2 x 5-3/8
Overall Width, incl. Ports, mm	190
Overall Width, incl. Ports, in.	7-1/2
No. per Case	1





*Or equivalent. Teflon is a registered trademark of DuPont.

Culture vessel, stirring assembly, closure and grommet are also available separately. Refer to Replacement Parts list.

A

2145 Probe Adapter Closure, polypropylene; silicone gasket

Allows insertion of 7- to 14-mm diameter probes into NALGENE 1- and 12-liter culture vessels. Provides a seal between the environment and the interior of the culture vessel to prevent contamination when a probe is in place. **Autoclavable**

Cat. No.2145	-0384
Closure Size	38-430
No. per Case	2

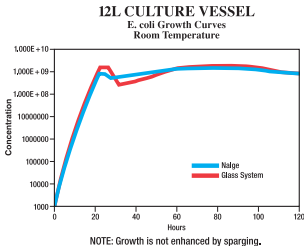
Other culture vessel closures and fittings for Cat. Nos. 2600 and 2605: Autoclavable septum closure (Cat. No. DS2168). Closures with barbed bulkhead fittings (Cat. No. DS2167), Barbed bulkhead fittings (Cat. No. 6149), see “Bottles and Carboys-Accessories”.

2600 Culture Vessel with Ports, polycarbonate; white polypropylene closures

Economical, lightweight, and break-resistant. Features four shoulder access ports. Graduated in 0.5-L increments from 3 to 12 L. Made from food grade resins meet the requirements of USP Class VI. Non-cytotoxic. **Autoclavable/USPVI/Transparent**

USP VI A

Cat. No.2600	-0012
Brim Cap., L	15
Working Cap., L	12
Overall Height x O.D., mm	429 x 289
Overall Height x O.D., in.	16-7/8 x 11-3/8
Closures, Top	100 mm
Closures, Side	38-430
No. per Pkg	1
No. per Case	2



Other culture vessel closures and fittings for Cat. Nos. 2600 and 2605: Autoclavable septum closure (Cat. No. DS2168). Closures with barbed bulkhead fittings (Cat. No. DS2167), Barbed bulkhead fittings Cat. No. 6149, see "Bottles and Carboys-accessories".

2602 Culture Vessel with BioTech Mixer

The Culture Vessel System includes a 12L Culture Vessel with Ports (Cat. No. 2600-0012); 1/8 HP Overhead Drive BioTech Mixer (Cat. No. 2653-0010 or 2653-0020), Lower Assembly with 13-1/2-in. shaft (3/8-in. diameter) with 4-in. axial flow glass-filled polypropylene impeller and a 2-1/2" wide polypropylene baffle. Excellent for top-to-bottom mixing. The BioTech Mixer provides variable speed, programmable speed/duration control, clockwise and counter-clockwise rotation and is specifically designed for maximum efficiency with system components. Mixers are certified for use in the U.S., Canada, Japan, and the European Community. Vessel and Lower Assembly are autoclavable.
USPVI/Transparent

USP VI

Cat. No.2602	-0110	-0220
Voltage	110	220
No. per Case	1	1

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

DS2167 Closures for Barbed Bulkhead Fittings, white polypropylene

Designed for use with NALGENE culture vessels. These 38-430 barbed polypropylene closures accomodate 1/4- or 1/2-inch (6-13mm) ID tubing. May be used with any NALGENE container with a 38-430 closure with ports (Cat. No. 2600) and culture vessel mixing system (Cat. No. 2602), these 38-430 polypropylene closures are pre-drilled for a 1/4- or 1/2-inch (6-13 mm) barbed bulkhead fitting. For fluid transfer on NALGENE containers with 38-430 closures. Components come unassembled. **Barbed bulkhead fitting also sold separately (Cat. No. 6149).** **Autoclavable**

A

Cat. No.DS2167	-0001	-0002
Bulkhead Fitting, in.	1/2	1/4
No. per Case	4	4

A

DS2227 Magnetic Carboy Stirrer, polyvinylidene fluoride, stainless steel-reinforced shaft; Teflon* TFE stir bar; TFE impeller; polypropylene screw closure

Ideal for low-speed mixing of large volumes of media and buffer solutions on a magnetic stir plate. For use with NALGENE 10- and 20-liter carboys with 83B (83-mm) closures (Cat. No. 2210-, 2250- and 2251-series). Adjusts easily to fit either a 10- or 20-L carboy. No magnet to retrieve. Supplied with an 83-mm closure and two TFE impellers. NOTE: Must be used with a magentic stir plate. **Autoclavable**

*Or equivalent. Teflon is a registered trademark of DuPont.

Cat. No.DS2227	-0020
Closure Size, mm	83B
Shaft O.D., mm	13
Shaft O.D., in.	1/2
Shaft Length, mm	588
Shaft Length, in.	23-1/8
Stir bar Dia., mm	13
Stir bar Dia., in.	1/2
Stir Bar Length, mm	75
Stir Bar Length, in.	3
No. per Case	1

A

DS2168 Autoclavable Septum Closure, polypropylene closure, thermoplastic elastomer septum

Unique closure system suitable for use with any bottle or container with a 38-430 neck, including NALGENE culture vessel (Cat. No. 2600) and culture vessel mixing system (Cat. No. 2602), media bottles, and other square bottles. Allows aseptic injection of reagent or sample withdrawal without compromising sterility or integrity of contents. Use with 18 gauge or smaller needle.* **Autoclavable**

*For research use only, not for *in vitro* diagnosis or parenterals.

Cat. No.DS2168	-0384
Size, mm	38-430
No. per Case	12

Cylinders

A

EARN

3662 Graduated Cylinders, polypropylene; blue polypropylene base

No meniscus to confuse readings. Guaranteed to meet accuracy requirements of ASTM Class B, E1272, "Cylinder, Graduated, Laboratory, Glass" and all requirements of ISO Standard 6706 "Plastic Laboratory Ware-Graduated Measuring Cylinders." Large blue base prevents tipping. All sizes have generous pour spout. Molded in translucent polypropylene. Molded-in large, easy-to-read graduations. Can be chemically sterilized without affecting accuracy. Can be autoclaved, but accuracy will be affected. Meets requirements of CFR 21, Part 177.1520. **Autoclavable/Graduated**

Cat. No.3662	-0010	-0025	-0050	-0100	-0250	-0500	-1000	-2000	-4000
Cap., ml	10	25	50	100	250	500	1000	2000	4000
Subdiv., ml	0.2	0.5	1.0	1.0	2.0	5.0	10.0	20.0	50.0
Limit of Error, ml	±0.20	±0.34	±0.50	±1.00	±2.00	±4.0	±6.0	±12.0	±29.0
No. per Pkg	1	1	1	1	1	1	1	1	1
No. per Case	24	18	18	12	12	8	6	4	2

3663 Graduated Cylinders, polymethylpentene; blue polypropylene base

No meniscus to confuse readings. Guaranteed to meet accuracy requirements of ASTM Class B, E1272, "Cylinder, Graduated, Laboratory, Glass" and all requirements of ISO Standard 6706 "Plastic Laboratory Ware-Graduated Measuring Cylinders (except sizes -2000 and -4000)." Large blue base prevents tipping. All sizes have generous pour spout. Can be chemically sterilized without affecting accuracy. Can be autoclaved, but accuracy will be affected. NOTE: Graduated cylinders are suitable for food and beverage use. PMP resin meets requirements of CFR 21, Part 177.1520.

Autoclavable/Transparent/Graduated

Cat. No.3663	-0010	-0025	-0050	-0100	-0250	-0500	-1000	-2000	-4000
Cap., ml	10	25	50	100	250	500	1000	2000	4000
Subdiv., ml	0.2	0.5	1.0	1.0	2.0	5.0	10.0	20.0	50.0
Limit of Error, ml	±0.20	±0.34	±0.50	±1.00	±2.00	±4.0	±6.0	±12.0	±29.0
No. per Pkg	1	1	1	1	1	1	1	1	1
No. per Case	24	18	18	12	12	8	6	4	2

3666 Graduated Cylinder, Teflon* PFA

Measure aggressive chemicals and other liquids without risk of breakage. Teflon* PFA has extraordinary chemical resistance and the widest temperature range among fluoropolymers (-270°C to +250°C). Also low in extractables. Cylinder is graduated at 2-ml increments with numbered graduations every 10 ml. (Graduations are nominal.) Molded-in spout makes it easy to dispense liquids. **Autoclavable/Graduated/PFA**

*Or equivalent. Teflon is a registered trademark of DuPont.

Cat. No.3666	-0100
Cap., ml	100
Subdiv., ml	2.0
Limit of Error, ml	±1.5
No. per Case	1

3664 Economy Graduated Cylinders, polypropylene

These translucent cylinders are an outstanding value! Molded-in graduations are large and easy to read. Large rounded bases are ribbed for reinforcement and stability. Generous pour spout; size -0010 has a conical top for easier filling and pouring. Non-wetting; calibrated TC/TD at 20 °C. Contact-clear. Very good chemical resistance. **Graduated**

Cat. No.3664	-0010	-0025	-0050	-0100	-0250	-0500	-1000
Cap., ml	10	25	50	100	250	500	1000
Subdiv., ml	0.2	0.5	1.0	1.0	2.0	5.0	10.0
No. per Pkg	1	1	1	1	1	1	1
No. per Case	24	18	18	12	12	8	6

3665 Economy Graduated Cylinders, polymethylpentene

These transparent cylinders have large molded-in graduations that are easy to read. Large rounded bases are ribbed for reinforcement and stability. Generous pour spout; size -0010 has a conical top for easier filling and pouring. Non-wetting; calibrated TC/TD at 20 °C. Very good chemical, heat and impact resistance. Window-clear. **Transparent/Graduated**

Cat. No.3665	-0010	-0025	-0050	-0100	-0250	-0500	-1000
Cap., ml	10	25	50	100	250	500	1000
Subdiv., ml	0.2	0.5	1.0	1.0	2.0	5.0	10.0
No. per Pkg	1	1	1	1	1	1	1
No. per Case	24	18	18	12	12	8	6

A

3673 Double-Scale Pharmaceutical Graduates, polymethylpentene

Transparent, shatterproof. Cost substantially less than glass. Excellent chemical resistance. Graduated in ounces and milliliters; Cat. No. 3673-0001 also graduated in drams*. Volumes easily read, no meniscus. **Autoclavable/Transparent/Graduated**

*125-ml (8-oz.) and larger conform to the volume and accuracy requirements of ASTM E1094.

Cat. No.3673	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Limit of Error, ml	±0.6	±1.1	±1.8	±3.4	±4.8	±9.0
No. per Pkg	1	1	1	1	1	1
No. per Case	12	12	12	12	8	6

Desiccators

5311 Desiccator, polycarbonate

Transparent, lightweight and unbreakable. For vacuum and non-vacuum applications. Safe and economical alternative to glass. Will not shatter or implode at full vacuum when used according to instructions included with product. Holds a vacuum of 28 in. Hg (711 mm) for 24 hours. For room temperature use only. Silicone O-ring assures an airtight seal; no need to use grease. Accepts 1/4" to 3/8" I.D. vacuum tubing. TPE caps seal side-arms for non-vacuum use. Takes any standard 230-mm desiccator plate, such as Cat. No. 5312-0230. Desiccator plate not included. **Transparent**

Cat. No.5311	-0250
Overall Height, mm	329
Overall Height, in.	12-15/16
O.D., mm	280
O.D., in.	11
I.D., mm	251
I.D., in.	9-7/8
Max. Clearance Above Plate, mm	195
Max. Clearance Above Plate, in.	7-11/16
No. per Pkg	1
No. per Case	4

CAUTION! Do not autoclave. Do not expose polycarbonate to organic solvents or their vapors.

A

5312 Desiccator Plate, light green ceramic-metal composite

This desiccator plate has greater resistance to thermal shock than porcelain. Fire-polished, corrosion-resistant, inert, non-stick glass surface bonded to metal. The plate is marked with numbered quadrants for easy location of crucibles and other containers. Plate has 24 holes; center is 7/8-in. Recommended for use with 5309-0250, 5310-0250 and 5311-0250. **Autoclavable**

Cat. No.5312	-0230
O.D., mm	230
O.D., in.	9-1/16
No. per Pkg	1
No. per Case	6

5309, 5310 Desiccators, 250-mm polycarbonate cover; blue polypropylene body and stopcock with Teflon* TFE plug (Cat. No. 5310 only)

Transparent PC cover and PP base will not shatter or implode at full vacuum when used according to instructions packed with product. Desiccator body is impervious to all solid desiccants, including acids** and alkalies. Cat. No. 5309 does NOT come with stopcock. Cat. No. 5310 comes with Teflon stopcock which may be used with 1/4-inch I.D. vacuum tubing. Convenient vacuum connection on body makes cover easy to handle. Straight-bore design eliminates stopcock leakage. No gasket necessary, no need to draw a vacuum to make cover airtight - only grease is needed. Recessed rim on cover keeps grease off bench-top when cover is set down. Desiccator takes any standard 230-mm desiccator plate such as Cat. No. 5312-0230 (order plate separately.) Cat. No. 5309 is autoclavable. Cat. No. 5310 is not autoclavable - designed for room-temperature use only. **Autoclavable/Transparent**

*Or equivalent. Teflon is a registered trademark of DuPont.

**DO NOT use concentrated acids as desiccants.

Desiccator, without Stopcock

Cat. No.5309	-0250
Overall Height, mm	262
Overall Height, in.	10-5/16
O.D., mm	330
O.D., in.	13
I.D., mm	246
I.D., in.	9-11/16
Max. Clearance Above Plate, mm	143
Max. Clearance Above Plate, in.	5-5/8
No. per Pkg	1
No. per Case	4

Desiccator, with Stopcock

Cat. No.5310	-0250
Overall Height, mm	262
Overall Height, in.	10-5/16
O.D. Including Stopcock, mm	330
O.D. Including Stopcock, in.	13
I.D., mm	246
I.D., in.	9-11/16
Max. Clearance Above Plate, mm	143
Max. Clearance Above Plate, in.	5-5/8
No. per Pkg	1
No. per Case	4

For replacement parts, see Reference/Replacement Parts pages.

A

5315 Desiccator, polycarbonate cover; blue polypropylene body; aluminum plate

Cover is transparent, unbreakable polycarbonate, with exclusive recessed-rim design; body is durable polypropylene, which is impervious to all solid desiccants. 140-mm aluminum plate is included.

Autoclavable/Transparent

Cat. No.5315	-0150
Overall Height, mm	149
Overall Height, in.	5-7/8
O.D., mm	181
O.D., in.	7-1/8
I.D., mm	149
I.D., in.	5-7/8
Max. Clearance Above Plate, mm	87
Max. Clearance Above Plate, in.	3-7/16
No. per Pkg	1
No. per Case	6

5317 Desiccator Cabinets, acrylic; stainless steel latches and hinge; neoprene gasket

Provide dust- and moisture-free storage in refrigerators, freezers, and on the benchtop. Useful to store anhydrous, hygroscopic biological, and chemical compounds, electronic assemblies or any components requiring controlled storage conditions. Neoprene gasket on door ensures a tight seal. Door is secured with two spring-loaded latches (3 on -0180) and full-height hinge. Removable, lipped tray holds solid desiccant. Shelves are removable, adjustable and vented to maximize air flow. **Transparent**

Cat. No.5317	-0070	-0120	-0180
No. of Shelves	2	3	4
No. of Grooves	3	5	7
H x W x D, mm	178 x 305 x 305	305 x 305 x 305	457 x 305 x 305
H x W x D, in.	7 x 12 x 12	12 x 12 x 12	18 x 12 x 12
No. per Case	1	1	1

Dispensers

2430 Aerosol Spray Bottle, high-density polyethylene; polypropylene cap

Pour any compatible liquid into the container and produce an aerosol spray. Reusable bottle can be filled and pressurized manually. Just pump the cap to charge the system. The system uses air pressure to propel contents from container; no external source of compressed air is required. Bottle components provide good chemical resistance to a wide variety of aqueous reagents. Translucent bottle permits visible volume check. Not for use with solvents. Two nozzles are included. Net fill 100-ml bottle.

Cat. No.2430	-0200
Cap., ml	180
Cap., oz.	6
No. per Pkg	1
No. per Case	4

3700 Precise-Volume Dispensers, low-density polyethylene; polypropylene measuring chamber

Deliver precise volume automatically, every time. Eliminate need for repetitive pipetting. A squeeze fills the chamber, another dispenses the exact amount. All units have 250-ml reservoir with choice of 1-, 2- or 5-ml measuring chamber sizes.

Cat. No.3700	-0001	-0002	-0005
Cap., ml	1	2	5
No. per Pkg	1	1	1
No. per Case	6	6	6

3702 Variable-Volume Dispensers, low-density polyethylene bottle and fill tube; polymethylpentene measuring chamber; polypropylene stem closure and push-pull stopper; high-density polyethylene ring-tab

Measuring chamber is calibrated in ounces and milliliters; measures up to 60 ml. Dispenser is leakproof when push-pull stopper on end of stem is closed. Ring-tab fits snugly around bottle neck for attaching a label. Designed to dispense bases, aqueous solutions and alcohols.

Cat. No.3702	-0025	-1660	-3260
Cap. of Bottle, ml	500	500	1000
No. per Pkg	1	1	1
No. per Case	6	6	6

Dropper Bottles

2750 Dropper Bottles, low-density polyethylene bottle, white polypropylene closure, low density polyethylene control dispensing tip

NALGENE dropper bottles provide reliable, repeatable dispensing of reagents and are an excellent alternative to pipetting and other dispensing devices. Excellent chemical resistance; materials are suitable for most biotech, diagnostic, and pharmaceutical applications. The flexible, contact-clear LDPE dropper bottle permits easy content identification. Available in three convenient sizes. Dropper control tip snaps into place for a secure fit and delivers 40µl drops (based on water; viscosity affects drop size). Drops are dispensed one at a time. Leakproof

Cat. No.2750	-9125	-9025	-9050
Cap., ml	4	8	15
Neck Finish	15-415	15-415	15-415
No. per Case	25	25	25

2751 Dropper Bottles, white low-density polyethylene bottle; white polypropylene closure; low-density polyethylene control dispensing tip

NALGENE dropper bottles provide reliable, repeatable dispensing of reagents and are an excellent alternative to pipetting and other dispensing devices. These white dispensing bottles are ideal for UV light-sensitive products. Excellent chemical resistance; materials are suitable for most biotech, diagnostic and pharmaceutical applications. Available in three convenient sizes. Dropper control tip snaps into place for a secure fit and delivers 40µl drops (based on water; viscosity affects drop size). Drops are dispensed one at a time. Leakproof

Cat. No.2751	-9125	-9025	-9050
Cap., ml	4	8	15
Neck Finish	15-415	15-415	15-415
No. per Case	25	25	25

Dropper Bottles

2752 Dropper Bottles, low-density polyethylene bottle; assorted colored polypropylene closures; low-density control dispensing tip

Reagent identification is made easy with the multiple-color dropper bottle lab pack. Closures are red, green, blue, white and yellow. The flexible, contact-clear LDPE bottle permits easy content identification and fluid fill volumes. NALGENE dropper bottles provide accurate, reliable, repeatable dispensing of various reagents and are an excellent alternative to pipetting and other dispensing devices. Excellent chemical resistance; materials are suitable for most biotech, diagnostic, and pharmaceutical applications. Available in three convenient sizes. Dropper control tip snaps into place for a secure fit and delivers 40µl drops (based on water; viscosity affects drop size). Drops are dispensed one at a time. **Leakproof**

Cat. No.2752	-9125	-9025	-9050
Cap., ml	4	8	15
Neck Finish	15-415	15-415	15-415
No. per Case	25	25	25

2753 Dropper Bottles, white low-density polyethylene bottle; assorted colored polypropylene closures; low-density polyethylene control dispensing tip

Reagent identification is made easy with the multiple-color dropper bottle lab pack. Closures are red, green, blue, white and yellow. These white LDPE bottles are ideal for UV light-sensitive products. NALGENE dropper bottles provide accurate, reliable, repeatable dispensing of various reagents and are an excellent alternative to pipetting and other dispensing devices. Excellent chemical resistance; materials are suitable for most biotech, diagnostic, and pharmaceutical applications. Available in three convenient sizes. Dropper control tip snaps into place for a secure fit and delivers 40µl drops (based on water; viscosity affects drop size). Drops are dispensed one at a time.

Cat. No.2753	-9125	-9025	-9050
Cap., ml	4	8	15
Neck Finish	15-415	15-415	15-415
No. per Case	25	25	25

2411 Drop-Dispenser Bottles, low-density polyethylene; polypropylene dropping closure and cap

Dispense just one drop at a time, with convenient, one-hand operation. Captive spout cap stays in place when bottle is squeezed. **Leakproof**

Cat. No.2411	-0015	-0030	-0060	-0125	-0250
Cap., ml	15	30	60	125	250
Cap., oz.	1/2	1	2	4	8
Closure Size, mm	20	20	20	24	24
No. per Pkg	12	12	12	12	6
No. per Case	72	72	48	48	36

A Teflon FEP

2414 Drop-Dispenser Bottle, Teflon* FEP; Tefzel* ETFE dropping closure & cap

Drop-dispensing bottle made of Teflon FEP and Tefzel ETFE handles virtually any chemical you need to dispense. Captive spout cap. **Autoclavable/Teflon FEP**

*Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

Cat. No.2414	-0030
Cap., ml	30
Cap., oz.	1
No. per Pkg	1
No. per Case	4

DS2420 Autoclavable Dispensing Bottles, polypropylene copolymer; blue polypropylene dropping closure and cap

Can be used to dispense sterile solutions. Bottles may be autoclaved full, with tips uncapped. Captive spout cap. **Autoclavable/Leakproof**

A

Cat. No.DS2420	-0125	-0250
Cap., ml	125	250
Cap., oz.	4	8
No. per Case	6	6

For replacement parts, see Reference/Replacement Parts pages.

2410 Unitary™ Dropping Bottles, low-density polyethylene; polypropylene screw closure

Deliver drops, not a stream. Include leaktight plug for spout. Cat. No. 2410-0250 has wide-mouth closure. **Leakproof**

Cat. No.2410	-0125	-0250
Cap., ml	125	250
Cap., oz.	4	8
Closure Size, mm	24	38
No. per Pkg	6	4
No. per Case	48	36

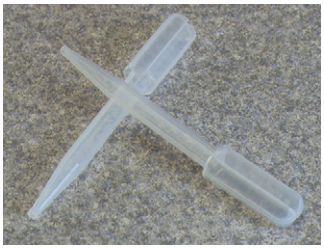
2416 Bottles with Dropper Assembly, low-density polyethylene; polypropylene screw closure

Unit consists of NALGENE narrow-mouth bottle and dropping pipet. Cat. No. 2416-0030 has all-polyethylene dropping pipet; other sizes have neoprene bulb.

Cat. No.2416	-0030	-0060	-0125
Cap., ml	30	60	125
Cap., oz.	1	2	4
Closure Size, mm	20	20	24
No. per Pkg	12	12	6
No. per Case	72	48	48

6219 Disposable Dropper, low-density polyethylene

Molded in one piece. Non-wetting material, tapered tip, and bellows-type bulb provide excellent drop formation. Delivers 30 to 35 drops per ml. Safe and economical. Visible liquid level.



Cat. No.6219	-0068
Tube Length, mm	68
Cap., ml	1.6
No. per Pkg	100
No. per Case	1000

Education

800 Student Labware Kit

Kit consists of a useful and varied assortment of the most popular labware items for the high school and undergraduate college chemistry laboratory. This break-resistant plastic labware means a safe, quiet laboratory and the economies of longer equipment life and lower replacement costs.

Kit contains:

- Griffin Low-Form Beakers (4), Cat. No. 1203; 50, 100, 250, 400 ml
- Half-Rack, Cat. No. 5972-0320
- Graduated Cylinders (2), Cat. No. 3665; 25, 100 ml
- Sample Vials with Closure (2), Cat. No. 6250; 50 ml
- Wash Bottle, Cat. No. 2402; 250 ml
- Forceps; Cat. No. 6320
- NALGENE 180 Clear Plastic Tubing, Cat. No. 8000, 6 ft., 1/4-in. I.D.
- Narrow-Mouth Bottles (2), Cat. No. 2002, 250, 500 ml
- Safety Thistle Tube, Cat. No. 6210
- Erlenmeyer Flask, Cat. No. 4108, 250 ml
- Disposable Droppers (6), Cat. No. 6219, 68 mm
- Analytical Funnel, Cat. No. 4250, 65 mm I.D.
- Drop-Dispenser Bottle, Cat. No. 2411, 30 ml
- Powder Funnel, Cat. No. 4252, 100 mm.
- Stirring Rod, Cat. No. 6169

Cat. No.800	-0010
No. per Pkg	1
No. per Case	6

900 L900 Liquid Detergent

Specifically formulated to clean NALGENE plastic labware and glass labware used in pharmaceutical, medical research, academic, biotechnology and other facilities. Formulated to be compatible with all plastics, especially polycarbonate. Will not cause crazing, stress cracking or clouding when used as directed. For hand or machine use, it is biodegradable, non-toxic and low foaming. Tested and found to be non-inhibitory according to APHA Standard Methods for the Examination of Water and Wastewater, 18th Edition, Section 9020b, Subsection 3, Part 2. Phosphate free.

Cat. No.900	-4000
Size, L	4
No. per Case	4

6320 Forceps, blue polypropylene

These all-plastic forceps feature double-action living hinges for extra leverage and long life. Jaws have interlocking teeth to grip objects tightly. Scissor-type handles have a ratchet to lock tips shut. A handy clamp for chromatography columns. Durable. **Autoclavable**

Cat. No.6320	-0010
No. per Pkg	12
No. per Case	72

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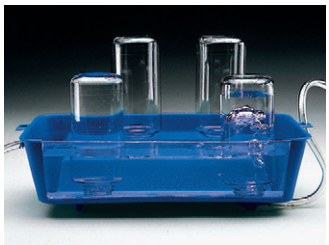
6820 Pneumatic Trough, blue polypropylene



This handy polypropylene trough makes the metal type obsolete. Lightweight, corrosion-proof, and quiet, with no sharp corners or separate parts to lose. Has convenient built-in gas inlet. Loop on rim elevates gas inlet tubing to avoid flooding. Built-in platform accommodates four 8-oz. wide-mouth bottles. Inlet connection and overflow port take 1/4-in. (6.4-mm) I.D. x 3/8-in. (9.5-mm) O.D. tubing. Tapered sides permit nesting for storage.

Cat. No.6820	-0010
Overall Dim., mm	311 x 172 x 76
Overall Dim., in.	12-1/4 x 6-3/4 x 3
No. per Pkg	1
No. per Case	6

Environmental

1100 Storm Water Sampler, high density polyethylene, EPDM gasket, polypropylene ball valve and closure.

Collects a full one liter first flush grab sample into a 1000ml NALGENE® HDPE sample bottle within the first minutes of storm water outfall flow. Floating ball valve automatically closes off sample port after bottle is full to prevent comingling with later run-off and volatile analyte loss. Meets EPA NPDES MSGP (Fed. Reg. FRL-6880-5 10/20/00) and most state general permit grab sampling requirements. Sample bottle is leakproof when closure is applied. Sampling device intended for one-time use. Use with Storm Water Mounting Kit (catalog number 1160-1000). Ideal for collecting samples for inorganic analyses. **Leakproof**

Cat. No.1100	-1000
Cap., ml	1000
Closure Size, mm	63
No. per Case	4

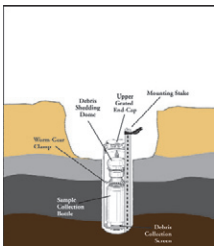
1120 Storm Water Sampler, amber glass bottle, EPDM gasket, fluorinated high-density polyethylene upper dome, polypropylene ball valve and Teflon-lined closure.

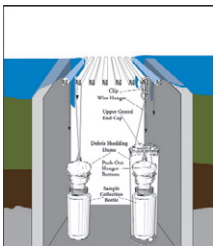
Specially designed for organic analysis. Fluorinated upper structure prevents oil and grease from sticking. Collects a full one liter first flush grab sample into a 1000ml amber glass sample bottle within the first minutes of storm water outfall flow. Floating ball valve automatically closes off sample port after bottle is full to prevent comingling with later run-off and volatile analyte loss. Meets EPA NPDES MSGP (Fed. Reg. FRL-6880-5 10/20/00) and most state general permit grab sampling requirements. Sampling device intended for one-time use. Use with Storm Water Mounting Kit (catalog number 1160-1000). **New Design/Leakproof**

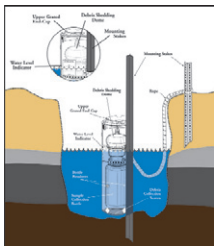
Cat. No.1120	-1000
Cap., ml	1000
Closure Size, mm	89
No. per Case	4

1160 Storm Water Mounting Kit, **UV stabilized high-density polyethylene tube, 24" steel stake, stainless steel worm clamp and lanyard, nylon rivets, polyester screen, wire hanger, carabiner-style snap**

Mounting tube can be positioned in storm water ditch, stream or grate outfalls. Collects only runoff–not the rain–when mounthed in ditch or stream outfalls. Use the wire hanger and carabiner-style snap to suspend the tube from a storm grate. For stream or ditch mounting, position the steel stake or a T-post in the outfall, and secure the mounting tube using the stainless steel worm clamp. Position once, and reload with disposable samplers (1100-1000 and 1120-1000 sold separately). Complete installation instructions included. **New Design**







Cat. No.1160	-1000
No. per Case	1

Environmental Sample Bottles

These economical, single-use, break-resistant bottles come in narrow- and wide-mouth configurations and sizes from 30 to 1000 ml. Guaranteed leakproof for safe sampling, shipping and storage.

2089 Narrow-Mouth Sample Bottles, **natural high-density polyethylene, natural polypropylene screw closure**

Translucent bottle allows viewing of liquid level. General-purpose single-use sample bottle. **Leakproof**

Cat. No.2089	-0001	-0002	-0004	-0008	-0016	-0032[TM1]
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	20	20	24	24	28	38-430
No. per Case	72	72	72	72	48	24

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

TM1Bottle neck design is protected by US Trademark Reg. No. 2857283

332089 Bulk-Packed Narrow-Mouth Environmental Sample Bottles, high-density polyethylene; polypropylene closures, assembled

Bulk-packed versions of our economical narrow-mouth environmental sample bottles (Cat. No. 2089).Translucent. **Leakproof**

Cat. No.332089	-0004	-0008	-0016	-0032TM1
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	24	24	28	38-430
No. per Case	500	250	125	50

2189 Wide-Mouth Sample Bottles, natural high-density polyethylene, natural polypropylene screw closure

Translucent HDPE. Wide mouth allows easy retrieval of grab samples and reduced turbulence when filling. General-purpose, single-use sample bottle. **Leakproof**

Cat. No.2189	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	28	28	38	43	53	63
No. per Case	72	72	72	72	48	24

332189 Bulk-Packed Wide-Mouth Environmental Sample Bottles, high-density polyethylene; polypropylene closures, assembled

Bulk-packed versions of our economical narrow-mouth environmental sample bottles (Cat. No. 2189).Translucent. **Leakproof**

Cat. No.33-2189	-0002	-0004	-0008	-0016	-0032
Cap., ml	60	125	250	500	1000
Cap., oz.	2	4	8	16	32
Closure Size, mm	28	38	43	53	63
No. per Case	1000	500	250	125	50

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

TM1Bottle neck design is protected by US Trademark Reg. No. 2857283

DS2085 Narrow-Mouth Sample Bottles, amber high-density polyethylene, amber polypropylene screw closure

Protects light-sensitive materials during sampling, shipping or storage. Single-use sample bottle.
Leakproof

Cat. No.DS2085	-0001	-0002	-0004	-0008	-0016	-0032TM1
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	20	20	24	24	28	38-430
No. per Case	72	72	72	72	48	24

DS2185 Wide-Mouth Sample Bottles, amber high-density polyethylene, amber polypropylene screw closure

Reduces UV light transmission to protect light-sensitive liquids. Wide mouth allows easy retrieval of grab samples and reduces turbulence when filling. Single-use sample bottle. **Leakproof**

Cat. No.DS2185	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	30	60	125	250	500	1000
Cap., oz.	1	2	4	8	16	32
Closure Size, mm	28	28	38	43	53	63
No. per Case	72	72	72	72	48	24

A

1000 Imhoff Settling Cone, polycarbonate; polypropylene screw closure

Designed for determining settleable matter in water and waste effluent. Also used to measure sand content in well water. The leakproof closure makes it possible to withdraw sediment for gravimetric analysis, and also aids in cleaning. Closure design enables user to read graduations to zero. The cone is fully graduated from 0-1000 ml: 0-1 ml by 0.1 ml; 1-10 ml by 0.5 ml; 10-20 ml by 1 ml; 20-40 ml by 2 ml; 40-100 ml by 10 ml; 100-500 ml by 50 ml; 500-1000 ml by 100 ml.
Autoclavable/Transparent/Graduated/Leakproof

Cat. No.1000	-0010
Cap., ml	1000
Closure Size, mm	13
Top Dia., mm	106
No. per Pkg	1
No. per Case	4

1001 Imhoff Cone Rack, acrylic

Made of durable, transparent acrylic. Securely holds three Imhoff cones, Cat. No. 1000. May also be used to hold 500- and 1000-ml sizes of NALGENE separatory funnels (Cat. Nos. 4300 and 4301) or glass separatory funnels. Wide base provides stability on the lab bench. **Transparent**

Cat. No.1001	-0010
Dim., mm	196 x 406 x 368
Dim., in.	7-3/4 x 16 x 14-1/2
No. per Pkg	1
No. per Case	4

For replacement parts, see Reference/Replacement Parts pages

1010 NALGENE Settlometer Kit, polycarbonate jar and cover, polypropylene paddle, Ten 15-ml conical centrifuge tubes, polycarbonate, polypropylene closures; instruction booklet & data sheet.

A valuable tool for waste-water treatment plant operators. Less expensive than glass. Settlometer and centrifuge tests for sludge quality are used in analyzing the activated sludge process. The 2-liter jar is lightweight, transparent, highly impact-resistant and has easy-to-read white graduations. The paddle permits agitation of sample without scratching jar. Tubes are designed to fit tabletop centrifuges up to 6000 x g, without cushions or adapters, eliminating the danger of broken glass fragments to operator or centrifuge. All kit components are chemically-resistant to “normal” sludge samples (pH range 3 to 10).

Transparent/Graduated

Cat. No.1010	-0507
Nom. Jar Cap., L	2
Nom. Jar Cap., gal.	1/2
Approx. Jar Dim., ht. x O.D., mm	191 x 133
Nom. Tube Capacity, ml	15
Tube Dim., O.D. x Ht., mm	17 x 119
No. per Pkg	1
No. per Case	4

Filterware

MF75TM Series NALGENE Filter Units*, Bottle Top Filters and Receivers

Easier to Use Shape

- The filter unit receivers have an ergonomic design.
- Tapered sides and “grip dimples” make the filter units and receivers easy to grip and handle.
- The wide base improves stability on the bench top.

*Except 115 ml filter units.

Improved Identification

- Lot number, catalog number, membrane type, pore size and expiration date are printed on filter units, bottle tops and receivers for easy identification and lot traceability.
- Color-coded filter collars tell you at a glance what membrane type you have.
  - Blue = Polyethersulfone (PES)
  - Yellow = Surfactant-free cellulose acetate (SFCA)
  - Green = Cellulose nitrate (CN)
  - Red = Nylon (NYL)

Great Performance

- Wider membranes mean faster flow. Only NALGENE has 75mm diameter membranes in 500ml and 1 liter sizes in all four of our membranes.
- For difficult to filter solutions, we have filters with even larger 90mm diameter membranes.

Choose the Best Membrane for your Application

- PES (polyethersulfone)—blue collar. The ultimate cell and tissue culture media membrane. Low protein binding, low extractables, no external wetting agents, fast flow.
- SFCA (surfactant-free cellulose acetate)—yellow collar. Much cleaner than standard cellulose acetate. Low protein binding, no wetting agent. A NALGENE product exclusive!
- CN (cellulose nitrate)—green collar. The standard membrane for general filtering of buffers and solutions.
- NYL (nylon)—red collar. For special applications. No wetting agents. The lowest in extractables. Excellent alcohol resistance.

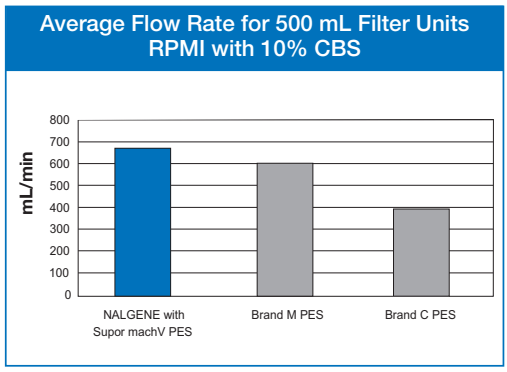
NALGENE Certified

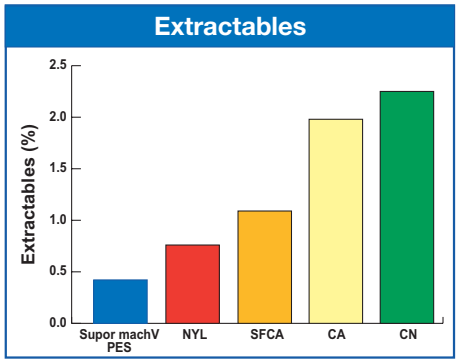
- Every lot of MF75 filter units, bottle tops and receivers is NALGENE Certified. Each case contains documentation that the product is sterile, non-pyrogenic, non-cytotoxic and has passed strict performance integrity tests. We guarantee it!
- Sterile shelf life is 5 years.

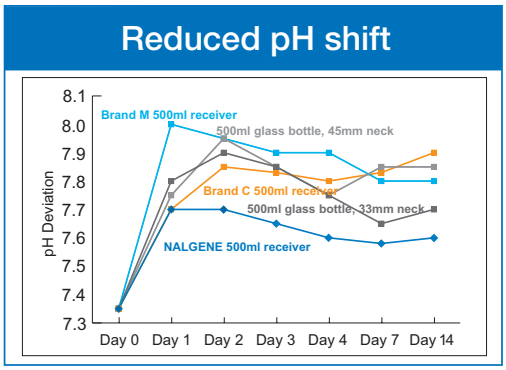
NALGENE Filtration Products with fast flowing Supor® machV membrane can make your lab more productive.

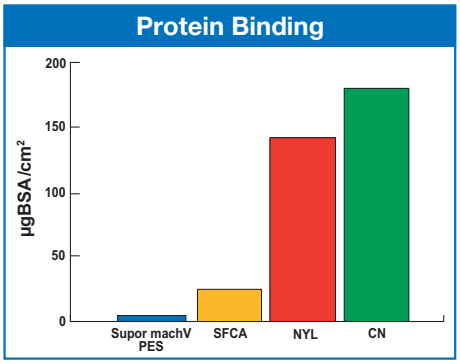
Disposable Filter Units; Bottle Top Filters; Syringe Filters

- Ideal membrane for critical media sterilization
- Faster flow rate
- Lowest protein binding membrane
- No external wetting agents mean low extractables
- NALGENE - certified performance
- Non-cytotoxic, non-pyrogenic
- Radiation-sterilized









*Except 115 ml filter units.
Supor is a registered trademark of Pall Corporation

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

524 Filter Unit - 115 ml Capacity, polystyrene housing

An economical asymmetric polyethersulfone filter unit that's ideal for small-volume benchtop filtration. Wide, stable base design. Pore size and membrane type are printed in easy-to-see BLUE on the side of each unit. **Sterile/Graduated**

STERILE

Cat. No.524	-0020
Upper Cap., ml	150
Receiver Cap., ml	115
Pore Size, µm	0.2
Membrane Dia., mm	50
No. per Case	72

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

STERILE

124 Filter Units - 115-ml Capacity, low-profile polystyrene housing; PES membrane

An economical polyethersulfone filter unit that's ideal for small-volume benchtop filtration. Wide, stable base design. Pore size and membrane type are printed in easy-to-see BLUE on the side of each unit. **Sterile/Graduated**

Cat. No.124	-0045
Upper Cap., ml	115
Receiver Cap., ml	115
Pore Size, µm	0.45
Membrane Dia., mm	50
No. per Pkg	12
No. per Case	72

NEW STERILE

564 Filter Units - 50 ml Capacity,, polystyrene housing; Supor®* machV PES membrane.

The optimal choice for small volume tissue culture work. Offers clean, fast filtration of 20 to 50ml of media or buffers using the Pall Supor® machV PES membrane. This low protein binding unit is non-cytotoxic and non-pyrogenic. Comes assembled with 50ml conical tube and a separate closure. Includes 2 reusable stands in each case. **Certified/New/Sterile/Graduated**

Cat. No.564	-0020
Upper Cap., ml	150
Receiver Cap., ml	50
Pore Size, µm	0.2
Membrane Dia., mm	50
No. per Case	12

*Supor is a registered trademark of Pall Corporation

STERILE NEW

EARN

565 Filter Units - 150-ml Capacity, MF75™ Series, polystyrene housing; Supor®* machV PES membrane.

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. With leakproof threaded closure for receiver BLUE collar. **Certified/Sterile/Graduated/New**

Cat. No.565	-0020
Upper Cap., ml	150
Receiver Cap., ml	150
Pore Size, µm	0.2
Membrane Dia., mm	50
No. per Case	12

*Supor is a registered trademark of Pall Corporation

165 Filter Units - 150-ml Capacity, MF75™ Series, polystyrene housing; PES membrane.

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. With leakproof threaded closure for receiver BLUE collar. **Certified/Sterile/Graduated**

Cat. No.165	-0045
Upper Cap., ml	150
Receiver Cap., ml	150
Pore Size, µm	0.45
Membrane Dia., mm	50
No. per Case	12

568 Filter Units - 250-ml Capacity, MF75™ Series, polystyrene housing; Supor®* machV PES membrane

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver. **Certified/Sterile/Graduated**

Cat. No.568	-0020
Upper Cap., ml	250
Receiver Cap., ml	250
Pore Size, µm	0.2
Membrane Dia., mm	50
No. per Case	12

*Supor is a registered trademark of Pall Corporation

168 Filter Units - 250-ml Capacity, MF75™ Series, polystyrene housing; PES membrane

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver. **Certified/Sterile/Graduated**

Cat. No.168	-0045
Upper Cap., ml	250
Receiver Cap., ml	250
Pore Size, µm	0.45
Membrane Dia., mm	50
No. per Case	12

566 Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; Supor®* machV 75mm PES membrane

75-mm diameter membrane for faster flow. Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver.
Certified/Sterile/Graduated

Cat. No.566	-0020
Upper Cap., ml	500
Receiver Cap., ml	500
Pore Size, µm	0.2
Membrane Dia., mm	75
No. per Case	12

*Supor is a registered trademark of Pall Corporation

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

166 Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; 75mm PES membrane

75-mm diameter membrane for faster flow. Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver.
Certified/Sterile/Graduated

Cat. No.166	-0045
Upper Cap., ml	500
Receiver Cap., ml	500
Pore Size, µm	0.45
Membrane Dia., mm	75
No. per Case	12

569 Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; 90-mm Supor®* machV PES membrane

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver. **Certified/Sterile/Graduated**

Cat. No.569	-0020
Upper Cap., ml	500
Receiver Cap., ml	500
Pore Size, µm	0.2
Membrane Dia., mm	90
No. per Case	12

*Supor is a registered trademark of Pall Corporation

169 Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; 90-mm PES membrane

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver. **Certified/Sterile/Graduated**

Cat. No.169	-0045
Upper Cap., ml	500
Receiver Cap., ml	500
Pore Size, µm	0.45
Membrane Dia., mm	90
No. per Case	12

567 Filter Units - 1000 ml Capacity, MF75™ Series, polystyrene housing; 90-mm Supor®* machV PES membrane

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver. **Certified/Sterile/Graduated**

Cat. No.567	-0020
Upper Cap., ml	1000
Receiver Cap., ml	1000
Pore Size, µm	0.2
Membrane Dia., mm	90
No. per Case	12

*Supor is a registered trademark of Pall Corporation

167 Filter Units - 1000 ml Capacity, MF75™ Series, polystyrene housing; 90-mm PES membrane

Ideal for biological and pharmaceutical sterilization requirements. Graduations on both uppers and receivers. Side-arm with cellulosic vent plug and quick-disconnect tubing adapter. BLUE collar. With leakproof threaded closure for receiver. **Certified/Sterile/Graduated**

Cat. No.167	-0045
Upper Cap., ml	1000
Receiver Cap., ml	1000
Pore Size, µm	0.45
Membrane Dia., mm	90
No. per Case	12

596 Bottle Top Filters - 150-ml Capacity, MF75™ Series, polystyrene housing; Supor®* machV PES membrane

50-mm diameter polyethersulfone membrane. Filters securely screw onto glass media bottles with 33- or 45-mm neck sizes. Allow direct filtration of liquid into sterile glass media bottles*. BLUE collar. Side-arm with quick-disconnect tubing adapter. **Certified/Sterile/Graduated**

Cat. No.596	-3320	-4520
Filter Cap., ml	150	150
Fits Bottle Neck Size, mm	33	45
Pore Size, µm	0.2	0.2
Membrane Dia., mm	50	50
No. per Case	12	12

*Supor is a registered trademark of Pall Corporation

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

296 Bottle Top Filters - 150-ml Capacity, MF75™ Series, polystyrene housing; PES membrane

50-mm diameter polyethersulfone membrane. Filters securely screw onto glass media bottles with 33- or 45-mm neck sizes. Allow direct filtration of liquid into sterile glass media bottles*. BLUE collar. Side-arm with quick-disconnect tubing adapter. **Certified/Sterile/Graduated**

Cat. No.296	-3345	-4545
Filter Cap., ml	150	150
Fits Bottle Neck Size, mm	33	45
Pore Size, µm	0.45	0.45
Membrane Dia., mm	50	50
No. per Case	12	12

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

595 Bottle Top Filters - 500-ml Capacity, MF75™ Series, polystyrene housing; 75mm Supor®* machV PES membrane

75-mm diameter polyethersulfone membrane. Filters securely screw onto glass media bottles with 33- or 45-mm neck sizes. Allow direct filtration of liquid into sterile glass media bottles*. Molded-in graduations. Side-arm with quick-disconnect tubing adapter. BLUE collar. **Certified/Sterile/Graduated**

Cat. No.595	-3320	-4520
Filter Cap., ml	500	500
Fits Bottle Neck Size, mm	33	45
Pore Size, µm	0.2	0.2
Membrane Dia., mm	75	75
No. per Case	12	12

*Supor is a registered trademark of Pall Corporation

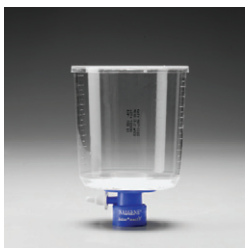
***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

295 Bottle Top Filters - 500-ml Capacity, MF75™ Series, polystyrene housing; 75mm PES membrane

75-mm diameter polyethersulfone membrane. Filters securely screw onto glass media bottles with 33- or 45-mm neck sizes. Allow direct filtration of liquid into sterile glass media bottles*. Molded-in graduations. Side-arm with quick-disconnect tubing adapter. BLUE collar. **Certified/Sterile/Graduated**

Cat. No.295	-3345	-4545
Filter Cap., ml	500	500
Fits Bottle Neck Size, mm	33	45
Pore Size, µm	0.45	0.45
Membrane Dia., mm	75	75
No. per Case	12	12

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.



597 Bottle Top Filters - 1000-ml Capacity, MF75™ Series, polystyrene housing; 90mm Supor®* machV PES membrane

90-mm diameter membranes for faster flow rates. Filters securely screw onto glass media bottles with 33- or 45-mm neck sizes. Allow direct flitration of liquid into sterile glass media bottles*. BLUE collar. Side-arm with quick-disconnect tubing adapter. **Certified/Sterile/Graduated**

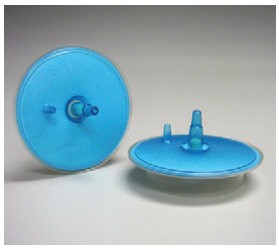
Cat. No.597	-3320	-4520
Filter Cap., ml	1,000	1,000
Fits Bottle Neck Size, mm	33	45
Pore Size, µm	0.2	0.2
Membrane Dia., mm	90	90
No. per Case	12	12

*Supor is a registered trademark of Pall Corporation

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

298 Large-Volume FastCap™ Bottle Top Filter- up to 5-L capacity, polystyrene housing, 90-mm PES membrane

FastCap™ Bottle Top Filter's universal fit eliminates the need to screw them onto glass media bottles*. Just place on bottle mouth, apply vacuum and start filtering. Fits bottle necks up to 53 mm. Filter up to 5L. Housing is blue. **Sterile**



Cat. No.298	-9020
Membrane Dia., mm	90
Pore Size, µm	0.2
Housing Color	Blue
No. per Case	10

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

122 Filter Units - 115-ml Capacity, low-profile polystyrene housing; SFCA membrane

SFCA membrane minimizes clogging and prevents loss of specific proteins. **Sterile/Graduated**

Cat. No.122	-0020	-0045
Upper Cap., ml	115	115
Receiver Cap., ml	115	115
Pore Size, µm	0.2	0.45
Membrane Dia., mm	50	50
No. per Pkg	12	12
No. per Case	72	72

155 Filter Units - 150-ml Capacity, MF75™ Series, polystyrene housing, SFCA membrane

Graduations on both uppers and receivers. Leakproof 1-1/2-turn threaded screw closure provided for receiver. YELLOW collar. Separate transparent, sterile receivers are available. **Certified/Sterile/Graduated**

Cat. No.155	-0020	-0045
Upper Cap., ml	150	150
Receiver Cap., ml	150	150
Pore Size, µm	0.2	0.45
Membrane Dia., mm	50	50
No. per Case	12	12

157 Filter Units - 250-ml Capacity, MF75™ Series, polystyrene housing, SFCA membrane

Graduations on both uppers and receivers. Leakproof 1-1/2 turn threaded screw closure provided for receiver. YELLOW collar. Separate transparent, sterile receivers are available. **Certified/Sterile/Graduated**

Cat. No.157	-0020	-0045
Upper Cap., ml	250	250
Receiver Cap., ml	250	250
Pore Size, µm	0.2	0.45
Membrane Dia., mm	50	50
No. per Case	12	12

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

156 Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; 75 mm SFCA membrane

Graduations on both uppers and receivers. Leakproof 1-1/2 turn threaded screw closure provided for receiver. YELLOW collar. Separate transparent, sterile receivers are available. Each case includes 12 glass-fiber prefilters. **Certified/Sterile/Graduated**

Cat. No.156	-4020	-4045
Upper Cap., ml	500	500
Receiver Cap., ml	500	500
Pore Size, µm	0.2	0.45
Membrane Dia., mm	75	75
No. per Case	12	12

162 Serum Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; 90 mm SFCA membrane

Disposable, sterile filter units with 90-mm diameter SFCA membrane (57.2-cm^2 usable filter area) and low protein binding. The only 500ml vacuum device designed for filtration of large volumes (over 200 ml) of whole serum. Large membrane surface provides excellent flow rates and throughput when filtering up to 500 ml of whole fetal bovine serum (FBS) or a lesser volume of other types of sera. 500ml upper and receiver. 1-1/2-turn leakproof, threaded screw closure provided for receiver. YELLOW collar.
Certified/Sterile/Graduated

Cat. No.162	-0020	-0045
Upper Cap., ml	500	500
Receiver Cap., ml	500	500
Pore Size, µm	0.2	0.45
Membrane Dia., mm	90	90
No. per Case	12	12

158 Tissue Culture Filter Units - 1,000-ml Capacity, MF75™ Series, polystyrene housing; 75 mm SFCA membrane

Graduations on both 500-ml uppers and 1000-ml receivers. Leakproof 1-1/2 turn threaded screw closure provided for receiver. YELLOW collar. Depending on particle load, throughput may not equal 1000 ml. Each case includes 12 glass-fiber prefilters. Separate transparent, sterile receivers are available. **Certified/Sterile/Graduated**

Cat. No.158	-0020	-0045
Upper Cap., ml	500	500
Receiver Cap., ml	1000	1000
Pore Size, µm	0.2	0.45
Membrane Dia., mm	75	75
No. per Case	12	12

161 Media-Plus Filter Units - 1000-ml Capacity, MF75™ Series, 90 mm SFCA membrane

Disposable, sterile filter units with 90-mm diameter SFCA membrane (57.2-cm^2 usable filter area) and low protein binding. Allow easy vacuum filtration of up to 1 liter of media with 20% serum, used in hybridoma research labs. Large membrane surface area and low protein binding provide excellent flow rates and throughput. 1000-ml upper and receiver. 1-1/2-turn threaded screw closure eliminates pH shift in receivers. Side-arm features a cellulosic vent plug and a quick-disconnect tubing adapter. YELLOW collar. Non-pyrogenic. **Certified/Sterile/Graduated**

Cat. No.161	-0020	-0045
Receiver Cap., ml	1000	1000
Upper Cap., ml	1000	1000
Pore Size, µm	0.2	0.45
Membrane Dia., mm	90	90
No. per Case	12	12

290 Bottle Top Filters -150-ml Capacity, MF75™ Series, polystyrene housing; SFCA membrane

Sterile, disposable tissue culture filters with 50-mm SFCA membrane. Securely screw onto media bottles with 33- or 45-mm neck sizes. Allow vacuum filtration of liquid directly into sterile bottles.* YELLOW collar. **Certified/Sterile/Graduated**

Cat. No.290	-3320	-3345	-4520	-4545
Filter Cap., ml	150	150	150	150
Fits Bottle Neck Size, mm	33	33	45	45
Pore Size, µm	0.2	0.45	0.2	0.45
Membrane Dia., mm	50	50	50	50
No. per Case	12	12	12	12

*CAUTION: Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

291 Bottle Top Filters - 500-ml Capacity, MF75™ Series, polystyrene housing; 75 mm SFCA membrane

Sterile, disposable tissue culture filters with 75-mm SFCA membrane. Securely screw onto media bottles with 33- or 45-mm neck sizes. Allow vacuum filtration of liquid directly into sterile bottles.* YELLOW collar. **Certified/Sterile/Graduated**

Cat. No.291	-3320	-3345	-4520	-4545
Filter Cap., ml	500	500	500	500
Fits Bottle Neck Size, mm	33	33	45	45
Pore Size, µm	0.2	0.45	0.2	0.45
Membrane Dia., mm	75	75	75	75
No. per Case	12	12	12	12

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

292 Bottle Top Filters - 1000-ml Capacity, MF75™ Series, polystyrene housing; 90-mm SFCA membrane

Sterile, disposable tissue culture filters with 90-mm SFCA membrane. 90-mm size offers greater throughput than 50- or 75- mm size. Securely screw onto media bottles with 33- or 45-mm neck sizes. Allow vacuum filtration of liquid directly into sterile bottles.* YELLOW collar. **Certified/Sterile/Graduated**

Cat. No.292	-3320	-4520
Filter Cap., ml	1000	1000
Fits Bottle Neck Size, mm	33	45
Pore Size, µm	0.2	0.2
Membrane Dia., mm	90	90
No. per Case	12	12

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

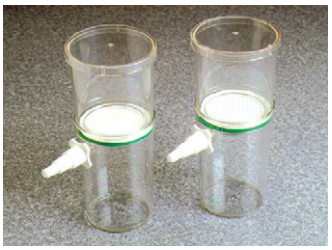
WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

STERILE

121 Filter Units - 115-ml Capacity, low-profile polystyrene housing; CN membrane

Graduations on both uppers and receivers. The side arm features a cellulosic vent plug and a quick-disconnent tubing adapter. **Sterile/Graduated**

Cat. No.121	-0020	-0045
Upper Cap., ml	115	115
Receiver Cap., ml	115	115
Pore Size, µm	0.2	0.45
Membrane Dia., mm	50	50
Membrane Color; Grid	White; None	White; Green
No. per Pkg	12	12
No. per Case	72	72



STERILE

120, 245, 380 Sterilization Filter Units - 115 ml Capacity, polystyrene housing; CN membrane Sterile/Graduated

Cat. No.120	-0020
Upper Cap., ml	115
Receiver Cap., ml	115
Pore Size, µm	0.2
Membrane Dia., mm	50
Membrane Color; Grid	White; none
No. per Pkg	12
No. per Case	72
Cat. No.245	**-0045**
Upper Cap., ml	115
Receiver Cap., ml	115
Pore Size, µm	0.45
Membrane Dia., mm	50
Membrane Color; Grid	White; Green
No. per Pkg	12
No. per Case	72
Cat. No.380	**-0080**
Upper Cap., ml	115
Receiver Cap., ml	115
Pore Size, µm	0.8
Membrane Dia., mm	50
Membrane Color; Grid	White; Black
No. per Pkg	12
No. per Case	72

STERILE

125 Filter Units - 150-ml Capacity, MF75™ Series, polystyrene housing; CN membrane

Feature a leakproof 1-1/2 turn threaded screw closure. GREEN collar. Separate transparent, sterile receivers are available. **Certified/Sterile/Graduated**

Cat. No.125	-0020	-0045	-0080
Upper Cap., ml	150	150	150
Receiver Cap., ml	150	150	150
Pore Size, µm	0.2	0.45	0.8
Membrane Dia., mm	50	50	50
Membrane Color; Grid	White; None	White; Green	White; Black
No. per Case	12	12	12

126 Filter Units - 250-ml Capacity, MF75™ Series, polystyrene housing; CN membrane

Feature a leakproof 1-1/2 turn threaded screw closure. GREEN collar. Separate transparent, sterile receivers are available. **Certified/Sterile/Graduated**

Cat. No.126	-0020	-0045	-0080
Upper Cap., ml	250	250	250
Receiver Cap., ml	250	250	250
Pore Size, µm	0.2	0.45	0.8
Membrane Dia., mm	50	50	50
Membrane Color; Grid	White; None	White; Green	White; Black
No. per Case	12	12	12

450 Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; 75-mm CN membrane

Feature a leakproof 1-1/2 turn threaded screw closure. GREEN collar. Each case includes 12 glass-fiber prefilters. Separate transparent, sterile receivers are available. **Certified/Sterile/Graduated**

Cat. No.450	-0020	-0045	-0080
Upper Cap., ml	500	500	500
Receiver Cap., ml	500	500	500
Pore Size, µm	0.2	0.45	0.8
Membrane Dia., mm	75	75	75
Membrane Color; Grid	White; None	White; Green	White; Black
No. per Case	12	12	12

127 Filter Units - 1000-ml Capacity, MF75™ Series, polystyrene housing; 75-mm CN membrane

500-ml upper with 1000-ml receiver. Feature a leakproof 1-1/2 turn threaded screw closure. GREEN collar. Each case includes 12 glass-fiber prefilters. We recommend the 1000-ml size for filtering aqueous solutions such as buffers. Depending on the particle load, throughput may not equal 1000 ml. Separate transparent, sterile receivers are available. **Certified/Sterile/Graduated**

Cat. No.127	-0020	-0045	-0080
Upper Cap., ml	500	500	500
Receiver Cap., ml	1000	1000	1000
Pore Size, µm	0.2	0.45	0.8
Membrane Dia., mm	75	75	75
Membrane Color; Grid	White; None	White; Green	White; Black
No. per Case	12	12	12

150 Filter Units - 150-ml Capacity, MF75™ Series, polystyrene housing; nylon membrane

RED collar. **Certified/Sterile/Graduated**

Cat. No.150	-0020	-0045
Upper Cap., ml	150	150
Receiver Cap., ml	150	150
Pore Size, µm	0.2	0.45
Membrane Dia., mm	50	50
No. per Case	12	12

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

153 Filter Units - 250-ml Capacity, MF75™ Series, polystyrene housing; nylon membrane

RED collar. **Certified/Sterile/Graduated**

Cat. No.153	-0020	-0045
Upper Cap., ml	250	250
Receiver Cap., ml	250	250
Pore Size, µm	0.2	0.45
Membrane Dia., mm	50	50
No. per Case	12	12

151 Filter Units - 500-ml Capacity, MF75™ Series, polystyrene housing; 75-mm nylon membrane

Each case contains 12 glass-fiber prefilters. RED collar. **Certified/Sterile/Graduated**

Cat. No.151	-4020	-4045
Upper Cap., ml	500	500
Receiver Cap., ml	500	500
Pore Size, µm	0.2	0.45
Membrane Dia., mm	75	75
No. per Case	12	12

163, 164 Media-Plus Filter Units - 500- & 1000-ml Capacities, MF75™ Series, polystyrene housing; 90-mm nylon membrane

Ideal for tissue-culture applications with sensitive cell lines or where a wetting agent may cause problems. Disposable, sterile filter units with large 90-mm diameter (57.2-cm^2 usable surface area) nylon membrane provide good flow rates and throughput. Tissue culture-grade nylon membrane has extremely low levels of extractables (less than 0.5% by weight), is inherently hydrophilic and contains no wetting agents. 1-1/2-turn, leakproof threaded screw closure eliminates pH shift in receivers. Side-arm features a cellulosic vent plug and a quick-disconnect tubing adapter. RED collar. **Certified/Sterile/Graduated**

Cat. No.163	-0020
Upper Cap., ml	500
Receiver Cap., ml	500
Pore Size, µm	0.2
Membrane Dia., mm	90
No. per Case	12
Cat. No.164	**-0020**
Upper Cap., ml	1000
Receiver Cap., ml	1000
Pore Size	0.2
Membrane Dia., mm	90
No. per Case	12

154 Filter Units - 1000-ml Capacity, polystyrene housing; 75-mm nylon membrane

500-ml upper with 1000-ml receiver. Depending on particle load, throughput may not equal 1000 ml. Each case contains 12 glass-fiber prefilters. RED collar. **Certified/Sterile/Graduated**

Cat. No.154	-0020	-0045
Upper Cap., ml	500	500
Receiver Cap., ml	1000	1000
Pore Size, µm	0.2	0.45
Membrane Dia., mm	75	75
No. per Case	12	12

455 Filter Unit Receivers, MF75™ Series; polystyrene, polyethylene storage cap

Easy-to-use ergonomic design. Can be used to store sterilized filtrate. Radiation-sterilized to save you time and minimize contamination. Also handy as presterilized, single-use storage containers. 1-1/2-turn threaded screw closure guarantees a leakproof seal and eliminates pH shift in receivers.

Certified/Sterile/Graduated/Leakproof

Cat. No.455	-0150	-0250	-0500	-1000
Cap., ml	150	250	500	1000
No. per Case	24	24	12	12

NALGENE® Analytical Filterware

NALGENE Analytical/Microbiological Filterware provides precise, easy-to-use systems for the recovery and growth of microorganisms in research and industry.

- Disposable, preassembled, presterilized filter units and funnels with membranes which are easily removed for culturing or other analysis.
- Units and funnels in this family have triton-free CN (cellulose nitrate) membranes
- CN membrane provides superior recovery and growth of microorganisms.
- NALGENE products are for microbiological analysis testing of water, food and beverage, raw materials and finished product.

NALGENE 0.45-µm pore size cellulose nitrate membrane filters have official certification for water quality work.

All NALGENE 0.45-µm pore size cellulose nitrate filter membrane as well as certain products containing these filters, are certified for water quality work. This means these filter membranes have been manufactured in accordance with materials standards or procedures reference in:

- American Public Health Association(APHA) *Standard Methods,* Current Edition.
- The U.S. Safe Drinking Water Act. P.L. 93-523
- Other requirements of the U.S. Environmental Protection Agency (EPA) including “Microbiological methods for monitoring the environment–water and wastes”, U.S. EPA; Part II Section C, page 74; U.S. Government Printing Office, 1978.

To meet certification requirements, representative samples of the filter material are tested for pore size, flow rate, extractables levels, neutrality and biological properties.

In addition, each case of NALGENE analytical filter units, Cat. No. 130-4045; analytical filter funnels, Cat. No. 140-4045; water quality membrane, Cat. No. DS0205-4045 contains a certificate that documents testing for water quality use. This certification can be part of your lab’s official quality control records as required by EPA lab certification guidelines.

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130 Analytical Filter Units, polypropylene upper, polystyrene lower; CN membrane

Designed for ease of use and better performance. Upper twists off easily for improved retrieval of the 47-mm membrane. Wider base is stable on the bench. Non-silicone gasket minimizes risk of contamination. Excellent for microbial analysis, sterility testing, water quality or environmental testing. Easy-opening bag. **Sterile/Graduated/Certified**

Cat. No.130	-4020	-4045
Upper Cap., ml	150	150
Receiver Cap., ml	150	150
Pore Size, µm	0.2	0.45
Membrane dia., µm	47	47
Membrane Color; Grid	White; none	White; gray
No. per Pkg	12	12
No. per Case	72	72

145, 147 Analytical Test Filter Funnels, polypropylene upper; high-impact polystyrene collar; CN membrane

Low-cost disposable, sterile filter funnels for microbiological analysis testing, food/beverages, raw material, sterility testing and finished product quality. Cat. No. 147 features gray, water quality cellulose nitrate membrane with white grid. The membrane turns black when wet, making it easier to detect and count growing colonies. Membranes meet U.S. Environmental Protection Agency (EPA) requirements for water quality work. Upper separates easily from lower for easy access to the membrane. Funnel adapter allows use with No. 8 stoppers (Cat. No. DS0396-0080). Six funnel adapters included with each case. Also sold separately, Cat. No. DS0397. Designed for single use only. **Sterile/Graduated**

Cat. No.145	-0020	-0045	-2020	-2045
Funnel Cap., ml	100	100	250	250
Pore Size, µm	0.2	0.45	0.2	0.45
Membrane Dia., mm	47	47	47	47
Membrane Color; Grid	White; None	White; Gray	White; None	White; Gray
No. per Case	50	50	50	50

Cat. No.147	-0045
Funnel Cap., ml	100
Pore Size, µm	0.45
Membrane Dia., mm	47
Membrane Color; Grid	Gray; White
No. per Case	50

140 Analytical Filter Funnels, polypropylene upper, polystyrene; CN membrane

Ideal for use with filtering flasks or manifolds. Upper chambers are graduated at 150 ml. Particularly useful for large volume analytical applications (as long as the membrane continues to flow). Convenient snap-away design with removable membrane. Safer and easier to use than cumbersome glass and metal funnels. Each package of 12 filters contains a NALGENE vacuum gasket to replace a stopper or adapter with 9/16-in. or larger opening. **Sterile/Graduated/Certified**

Cat. No.140	-4045
Funnel Cap., ml	150
Pore Size, µm	0.45
Membrane Dia., mm	47
Membrane Color; Grid	White; Gray
No. per Pkg	12
No. per Case	72

DS0315 Filter Funnel with Clamp, polysulfone funnel;polypropylene copolymer cover; TPE cap; silicone gasket; No. 8 rubber stopper; aluminum clamp

Durable, break-resistant plastic filter funnel complete with clamp for use in microbial and particulate analysis. Same funnel design as glass funnels – but break resistant. Clear polysulfone is non-toxic, exhibits low protein binding and is easy to clean. Upper reservoir is graduated in 25-ml increments from 100 to 250 ml. No leakage or bypass even after autoclaving. Membrane support plate firmly holds 47-mm membrane. Snug-fitting cover has three ports, each fitted with friction-fit cap. Spring-loaded clamp holds funnel and stem together yet allows easy access for retrieval and replacement of membrane. Clamp allows one-handed operation. Funnel may be used with any filtering flask or filter manifold which accepts a No. 8 rubber stopper with a 9/16-in. (15-mm) hole (Cat. No. DS0396-0080). Funnel available separately. **Autoclavable/Graduated**

Cat. No.DS0315	-0047
Funnel Cap., ml	250
Diameter, mm	47
No. per Case	1

DS0396 Filter Stopper, No. 8, rubber

For use with Cat. Nos. 145- and 147-series analytical test filter funnels and filter funnel with clamp (Cat. No. DS0315).

Cat. No.DS0396	-0080
No. per Case	3

DS0395 Vacuum Gasket, thermoplastic elastomer

Use this gasket with any filtering flask that requires a No. 7 or No. 8 stopper. Filter funnel slides quickly and easily in and out of gasket, without being jammed. One vacuum gasket is packed with each NALGENE filter holder with funnel, Cat. No. DS0310, and with each package of analytical filter funnels, Cat. No. 140.

Cat. No.DS0395	-0708
Height, mm	30
Height, in.	3/16
Thickness, mm	3
Thickness, in.	7/64
O.D. (tapered), mm	40 to 28
O.D. (tapered), in.	1-9/16 to 1-3/32
No. per Case	6

DS0397 Filter Funnel Adapter, polypropylene

Bulk-packed version of funnel adapters included with 145- and 147-series analytical test filter funnels. Non-sterile. **Autoclavable**

Cat. No.DS0397	-0010
No. per Case	25

A

Reusable Filterware

NALGENE reusable filters reduce the amount of waste released into the waste stream for environmentally-friendly microbiological analysis. Holders permit sterilization or analytical filtration, using vacuum or pressure. For use with 47- or 50-mm membranes. Major holder components are molded of durable, highly break-resistant, transparent polysulfone (PSF). PSF is nontoxic, exhibits low protein-binding and is easy to clean. PSF contains extremely low levels of trace metals or organic leachables and has fairly good chemical resistance. (See Chemical Resistance Guidelines for membranes and housing). All holders feature a graduated upper chamber. Two different membrane support plates are provided (except Cat. No. DS0320):

- Sterilization plate (one-piece, clear): designed to provide maximum flow rate and throughput.
- Analytical plate (two-piece, white): designed to provide optimal membrane support and to keep membrane flat.

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300 Filter Holder with Receiver, polysulfone

Eliminate the need for a manifold and/or breakable glass vacuum flask. Receiver is graduated. Two side-arms allow connection to vacuum line; also accept syringe filters. Tubing adapter can be stuffed with cotton for sterile venting during autoclaving; accepts 1/4-in. to 5/16-in. (6- to 8-mm) I.D. vacuum tubing. Cover allows convenient storage of sterile filtrate. **Autoclavable/Graduated**

Cat. No.300	-4000	-4050	-4100
Cap., Upper Chamber, ml	250	500	500
Cap., Receiver, ml	250	500	1000
Overall Width incl. Sidearms, mm	110	134	134
Diameter of Receiver, mm	83	117	114
Height, Incl. Cover Ports, mm	180	230	293
Nom. filter area, with analytical support plate, cm^2	11.25	11.25	11.25
Nom. filter area with sterilization support plate, cm^2	13.3	13.3	13.3
No. per Pkg	1	1	1
No. per Case	4	4	4

DS0310 Filter Holder with Funnel, polysulfone

Can be used with any filtering flask or manifold that accepts a suitable rubber stopper with hole. Comes with one easy-to-use, no twist NALGENE vacuum gasket which can replace a No. 7 or 8 rubber stopper with 9/16-in. (15-mm) hole. **Autoclavable/Graduated**

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Cat. No.DS0310	-4000	-4050
Cap., Upper Chamber, ml	250	500
Diameter, mm	94	120
Height, Incl. Cover Ports, mm	190	214
Nom. filter area, with analytical support plate, cm^2	11.25	11.25
Nom. filter area with sterilization support plate, cm^2	13.3	13.3
No. per Case	1	1

DS0320 Reusable Bottle Top Filters, polysulfone; silicone O-ring; polypropylene vacuum adapter

The convenience of a bottle top filter with the cost savings of a reusable filter housing. Screw securely onto glass media bottles* with 33- or 45-mm neck sizes. Deep threads screw onto bottle for convenient filling and vacuum filtration without holding filter to bottle. Removable sterilization membrane support plate is designed to provide maximum flow rate and throughput. Vacuum port on lower half of assembly. Molded-in graduations. Available in 250- and 500-ml sizes. Polypropylene tubing adapter can be stuffed with cotton for sterile venting during autoclaving. Accepts 1/4-inch to 5/16-inch (6- to 8-mm) I.D. vacuum tubing. Non-cytotoxic. **Autoclavable/Graduated**

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Cat. No.DS0320	-2533	-2545	-5033	-5045
Cap., Upper Chamber, ml	250	250	500	500
Neck Diameter, mm	33	45	33	45
Nom. filter area with sterilization support plate, cm^2	13.3	13.3	13.3	13.3
No. per Case	1	1	1	1

***CAUTION:** Use only sterile bottles designed for use with vacuum. Always use safety shield during vacuum procedures.

DS0330 In-Line Filter Holder, polysulfone; silicone O-ring

For in-line removal of particles or microbial contaminants from liquids or gases, as in clarification or cold sterilization. Holds 47- or 50-mm membrane. Removable tubing connectors on both ends fit 3/8-in. (9.5-mm) I.D. tubing. Provided with attachable Luer-Lok* fitting to permit use with syringe. Holder can be used as an aseptic filling bell. Replacement o-rings and fittings available separately. **Autoclavable**

A

Cat. No.DS0330	-4000
Overall Length, incl. Tubing Connector (nom.), mm	100
Dia., mm (nom.)	65
No. per Case	1

*Registered trademark of Becton-Dickinson

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

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DS0335 Open-Faced Filter Holder, polysulfone; silicone O-ring

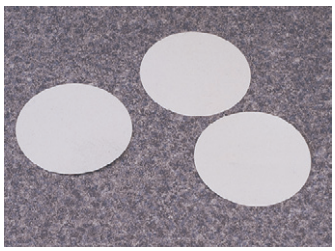
For open-space sampling of air for particles and microorganisms, for sampling aerosols and the environment. For vacuum filtration only. Holds 47- or 50-mm membrane. Removable tubing connector on one end fits 3/8-in. (9.5-mm) I.D. tubing. Replacement o-rings and fittings available separately. **Autoclavable**

Cat. No.DS0335	-4000
Overall Length, incl. Tubing Connector (nom.), mm	61
Dia., mm (nom.)	65
No. per Case	1

Filterware Membranes

Membranes and prefilters are ideal for use with the following NALGENE filtration products: Filter holders with receiver/with funnel, Cat. Nos. 300- and DS0310-series; In-line filter holder, Cat. No. DS0330-series, Filter funnel with clamp, Cat. No. DS0315-series; Bottle top filters, Cat. No. DS0320-series.

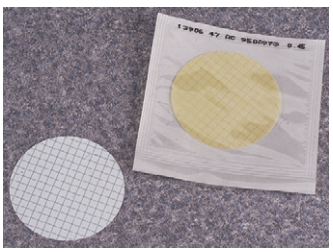
Membrane filters are convenient for most applications and have very low levels of extractables, typically less than 1% by weight.



DS0200 Membrane Filters, cellulose nitrate (CN)

Cellulose nitrate demonstrates superior recovery of microorganisms. Suitable for microbial analysis, sterility testing, food and beverage testing. 0.45µm membrane conforms to standard methods, can be autoclaved at 121°C and has grid to facilitate counting. Can be cleared, using immersion oil, for direct observation. Non-sterile.

Cat. No.DS0200	-4020	-4045
Membrane Dia., mm	47	47
Pore Size, µm	0.2	0.45
Color	White	White with green grid
No. per Case	100	100



STERILE A

DS0205 Water Quality Membrane, cellulose nitrate (CN)

Certified to meet requirements of Standard Methods for water quality work. Contains no extractables that will inhibit or stimulate growth of bacteria. Has no significant effect on the pH of the medium. Exhibits neither toxicity nor chemical or physical changes induced by the sterilization technique. Individually wrapped. **Sterile/Autoclavable**

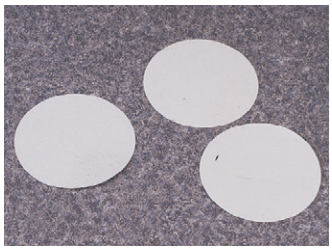
Cat. No.DS0205	-4045
Membrane Dia., mm	47
Pore Size, µm	0.45
Membrane Color; Grid	White; Green
No. per Case	100

Membrane Specifications (for listed flat stock only)

Filter Cat. No.	Material	Pore Size, µm	(Min.) Bubble Point, psig	(Min.) Flow Rate, Water[1]	Max. Temp[2], °C
DS0200-4045	C.N.	0.45	40	51	130
DS0205-4045	C.N.	0.45	40	51	130
DS0210-4045	C.A.	0.45	29	51	120
DS0200-4020	C.N.	0.20	58	18	130
DS0210-4020	C.A.	0.20	49	21	120
DS0215-4020	NYL	0.20	46	19	125
DS0215-4045	NYL	0.45	25	37	125

[1]All values in ml/min./cm2, measured at 14.7 psig
[2]All membranes are autoclavable

DS0210 Membrane Filters, cellulose acetate (CA)



Filter of choice for cold sterilization of proteinaceous solutions. Low adsorption of proteins from serum or culture media so filtration is more efficient. Cellulose acetate has excellent thermal properties and is autoclavable to 125°C (must be wet when autoclaved). Has superior chemical resistance to alcohol and oil; can even be used in short-term contact with methyl ethyl ketone. Suited for liquid scintillation studies. Can be cleared for direct observation using paraffin or almond oil. Non-sterile. **Autoclavable**

Cat. No.DS0210	-4020	-4045
Membrane Dia., mm	47	47
Pore Size, µm	0.2	0.45
Membrane Color	White	White
No. per Case	100	100

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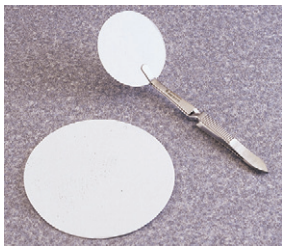
DS0281 Prefilters, glass-fiber



Thin, non-sterile. Available in three sizes for use with 50-, 75- and 90-mm diameter membrane filters. Use with NALGENE disposable filter units. The 75-mm size is included in cases of NALGENE 500- and 1000-ml nylon membrane and surfactant-free cellulose acetate membrane filter units. **Autoclavable**

Cat. No.DS0281	-5000	-7500	-9000
Prefilter Dia., mm	50	75	90
No. per Case	100	100	100

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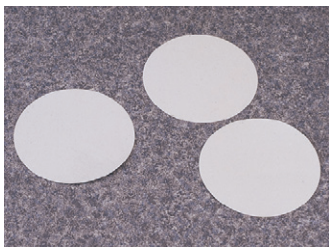
DS0215 Membrane Filters, white nylon



Material of choice for both aqueous and organic solvent filtrations where reduced contamination is important. Inherently hydrophilic; extremely low levels of extractables; contain no wetting agent. Less brittle and easier to handle than cellulosics. Useful for sterilization and clarification of buffers and culture media. Ideal for use with HPLC solvents and ultracleaning solutions for electronics laboratories. Non-sterile. **Autoclavable**

Cat. No.DS0215	-4020	-4045
Membrane Dia., mm	47	47
Pore Size, µm	0.2	0.45
Membrane Color	White	White
No. per Case	100	100

A

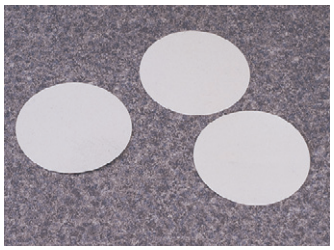
NALGENE 0.45-µm pore size cellulose nitrate membrane filters have official certification for water quality work.

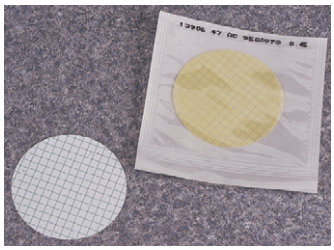
All NALGENE 0.45-µm pore size cellulose nitrate filter membrane as well as certain products containing these filters, are certified for water quality work. This means these filter membranes have been manufactured in accordance with materials standards or procedures reference in:

- American Public Health Association(APHA) *Standard Methods*, Current Edition.
- The U.S. Safe Drinking Water Act. P.L. 93-523
- Other requirements of the U.S. Environmental Protection Agency (EPA) including "Microbiological methods for monitoring the environment–water and wastes", U.S. EPA; Part II Section C, page 74; U.S. Government Printing Office, 1978.

To meet certification requirements, representative samples of the filter material are tested for pore size, flow rate, extractables levels, neutrality and biological properties.

In addition, each case of NALGENE analytical filter units, Cat. No. 130-4045; analytical filter funnels, Cat. No. 140-4045; water quality membrane, Cat. No. DS0205-4045 contains a certificate that documents testing for water quality use. This certification can be part of your lab's official quality control records as required by EPA lab certification guidelines.





Syringe Filter Application Guide

	Cat. No.	Application	Volume	Prefilter/ membrane/housing	Pore size, µm	Memb. dia.,	Filter area	Housing burst pressure (psig/bar)	Bubble Point (psig/bar)	Hold Up Vol., after air purge	Nom. Flow Rate, water at 14.7/1 psig/bar (ml/min.)
	171-0020 Non-sterile bulk-packed	Cleaning of micro/immunological reagents, enzymes, antibodies	0.5-1 ml	C.A. membrane PP housing	0.2	4 mm	7 mm^2	75/5.1	45/3.1	10µl	3
	171-0045 Non-sterile bulk-packed	Prefiltration of micro/immunological reagents	0.5-1 ml	C.A. membrane PP housing	0.45	4 mm	7 mm^2	75/5.1	28/1.9	10µl	10
	176-0020 Non-sterile bulk-packed	Cleaning of aqueous solutions, HPLC solvents, alcohols and DMSO	0.5-1 ml	Nylon membrane PP housing	0.2	4 mm	7 mm^2	75/5.1	40/2.7	10µl	1
	176-0045 Non-sterile bulk-packed	Prefiltration and clarification of aqueous solutions, HPLC solvents, alcohols and DMSO	0.5-1 ml	Nylon membrane PP housing	0.45	4 mm	7 mm^2	75/5.1	29/1.9	10µl	3
S 	180-1320 Sterile individually blister-packed	Sterilization of microbial media, proteinaceous solutions and tissue culture reagents	2-10 ml	PES membrane Modified acrylic housing	0.2	13 mm	0.8 cm^2	75/5.1	35/2.4	20µl	22†
	187-1320 Non-sterile bulk-packed; autoclavable	Cleaning of organic solvents and alcohols; venting of air, gases	2-10 ml	PTFE membrane PP housing	0.2	13 mm	0.8 cm^2	100/7.1	13/0.9	30µl	15††
	187-1345 Non-sterile bulk-packed; autoclavable	Prefiltration and clarification of organic solvents and alcohols; venting of air, gases	2-10 ml	PTFE membrane PP housing	0.45	13 mm	0.8 cm^2	100/7.1	7/0.5	30µl	28††
	189-2000 Non-sterile bulk-packed	Prefiltration and clarification of highly viscous solutions, removal of large particulates	N/A	Glass-Fiber prefilter; Modified acrylic housing from suspensions	N/A	25 mm	5.3 cm^2	75/5.1	N/A	N/A	N/A
S 	190-2520/190-9920 Sterile, individually blister-packed	Sterilization of microbial media, proteinaceous solutions and tissue culture reagents	10-50ml	SFCA membrane Modified acrylic housing	0.2	25 mm	5.3 cm^2	75/5.1	45/3.1	0.25 ml	90
S 	190-2545/190-9945 Sterile, individually blister-packed	Prefiltration/clarification of aqueous solutions/alcohols, prefiltration of serum and other proteinaceous samples	10-50ml	SFCA membrane Modified acrylic housing	0.45	25 mm	5.3 cm^2	75/5.1	28/1.9	0.25 ml	180
S 	190-2580 Sterile, individually blister-packed	Prefiltration, serial filtration and clarification of aqueous solutions, serum and alcohols. Removal of cell residues	10-50ml	C.A. membrane Modified acrylic housing	0.8	25 mm	5.3 cm^2	75/5.1	7/0.5	0.25 ml	300
	191-2020 Non-sterile bulk-packed	Cleaning of aqueous and proteinaceous solutions and alcohols	10-50ml	SFCA membrane Modified acrylic housing	0.2	25 mm	5.3 cm^2	75/5.1	45/3.1	0.25 ml	90
	191-2045 Non-sterile bulk-packed	Prefiltration/clarification of aqueous solutions/alcohols, prefiltration of serum and other proteinaceous samples	10-50ml	SFCA membrane Modified acrylic housing	0.45	25 mm	5.3 cm^2	75/5.1	28/1.9	0.25 ml	180
	191-2080 Non-sterile bulk-packed	Prefiltration, serial filtration and clarification of aqueous solutions, serum and alcohols. Removal of cell residues	10-50ml	C.A. membrane Modified acrylic housing	0.8	25 mm	5.3 cm^2	75/5.1	7/0.5	0.25 ml	300
S 	192-2520 Sterile, individually blister-packed	Two-stage filtration (prefilter/membrane) for sterilization of highly viscous solutions and/or with high particle loads	10-200ml	Glass-fiber pre-filter; C.A. membrane modified acrylic housing	0.2	25 mm	5.3 cm^2	75/5.1	45/3.1	0.2 ml	90
S 	194-2520 Sterile, individually blister-packed	Sterilization of microbial media, proteinaceous solutions and tissue culture reagents	10-100 ml	PES membrane Modified acrylic housing	0.2	25 mm	5.3 cm^2	75/5.1	42/2.8	0.15 ml	175†
S 	194-2545 Sterile, individually blister-packed	Sterilization of microbial media, proteinaceous solutions and tissue culture reagents	10-100 ml	PES membrane Modified acrylic housing	0.45	25 mm	5.3 cm^2	75/5.1	30/2.1	0.15 ml	300†
S 	195-2520 Sterile, individually blister-packed	Sterilization of tissue culture media, cleaning of aqueous solutions, HPLC solvents, alcohols and DMSO	10-50ml	Nylon membrane PP housing	0.2	25 mm	2.8 cm^2	90/6.2	42/2.8	0.15 ml	35*
S 	195-2545 Sterile, individually blister-packed	Prefiltration and clarification of aqueous solutions, HPLC solvents, alcohols and DMSO	10-50ml	Nylon membrane PP housing	0.45	25 mm	2.8 cm^2	90/6.2	25/1.7	0.15 ml	95*
	196-2020 Non-sterile bulk-packed; autoclavable	Cleaning of aqueous solutions, HPLC solvents, alcohols and DMSO	10-50ml	Nylon membrane PP housing	0.2	25 mm	2.8 cm^2	90/6.2	42/2.8	0.15 ml	35*
	196-2045 Non-sterile bulk-packed; autoclavable	Prefiltration and clarification of aqueous solutions, HPLC solvents, alcohols and DMSO	10-50ml	Nylon membrane PP housing	0.45	25 mm	2.8 cm^2	90/6.2	25/1.7	0.15 ml	95*
	199-2020 Non-sterile bulk-packed; autoclavable	Cleaning of organic solvents and alcohols, venting of air and other gases	10-50ml	Teflon PTFE membrane; PP housing	0.2	25 mm	2.8 cm^2	90/6.2	15/1.0**	0.25 ml	45**
	199-2045 Non-sterile bulk-packed; autoclavable	Prefiltration and clarification of organic solvents and alcohols, venting of air and gases	10-50ml	Teflon PTFE membrane; PP housing	0.45	25 mm	2.8 cm^2	90/6.2	6/0.4**	0.25 ml	80**
	DS0222-0020 Non-sterile bulk-packed; autoclavable	Cleaning of organic solvents and alcohols, venting of air and other gases	0.2-5L	PTFE membrane; PP housing	0.2	50 mm	20 cm^2	60/4.1	13/0.9**	1.0 ml	5000§
	DS0222-0045 Non-sterile bulk-packed; autoclavable	Prefiltration and clarification of organic solvents and alcohols, venting of air and gases	0.2-5L	PTFE membrane; PP housing	0.45	50 mm	20 cm^2	60/4.1	7/10.5**	1.0 ml	8500§

S Indicates sterile product † at 45 psig/3.1 bar with water †† at 15 psig/1.0 bar with methanol * Water at 13.5 psig ** Isopropanol § Air at 1.4 psig/0.1 bar

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

171 Syringe Filters, polypropylene housing, cellulose acetate (CA) membrane

For cold sterilization of aqueous solutions, biological or immunological samples. Low protein binding, low extractables. Excellent for small-volume assays such as EIA and ELISA. Sample volume size: 0.5-1.0 ml. Inlet: Female Luer-Lok*; Outlet: Male Luer slip. Non-sterile.

Cat. No.171	-0020	-0045
Membrane Dia., mm	4	4
Pore Size, µm	0.2	0.45
No. per Pkg	100	100
No. per Case	400	400

*Registered trademark of Becton Dickinson

176 Syringe Filter, polypropylene housing, nylon membrane

For filtration of HPLC and GC solvents and DMSO. Chemically-resistant to a wide range of solvents. Inherently hydrophilic, contains no wetting agents or plasticizers. Low level of extractables. Sample volume size: 0.5-1.0 ml. Inlet: Female Luer-Lok*; Outlet: Male Luer slip. Non-sterile.

Cat. No.176	-0020	-0045
Membrane Dia., mm	4	4
Pore Size, µm	0.2	0.45
No. per Pkg	100	100
No. per Case	400	400

*Registered trademark of Becton Dickinson.

STERILE

180 Syringe Filter, acrylic housing; polyethersulfone (PES) membrane

The universal tissue culture membrane. Offers higher flow rates, lower protein binding and lower extractables than competitive cellulosic membranes. Inherently hydrophilic; contains no external wetting agents. Sample volume size: 2-10 ml. Inlet: Female Luer-Lok*; Outlet: Male Luer slip. Certified sterile, non-cytotoxic and non-pyrogenic. Do not autoclave. **Sterile**

Cat. No.180	-1320
Membrane Dia., mm	13
Pore Size, µm	0.2
No. per Case	50

*Registered trademark of Becton Dickinson

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187 Syringe Filters, polypropylene housing; Teflon* PTFE membrane

For filtration of aggressive chemicals, including acids and non-aqueous solvents, such as those used in GC and HPLC. For filtration of air and gases. Wet membrane with alcohol before use with aqueous solutions. Inlet: Female Luer-Lok**; Outlet: Male Luer slip. Non-sterile. **Autoclavable**

Cat. No.187	-1320	-1345
Membrane Dia., mm	13	13
Pore Size, µm	0.2	0.45
No. per Case	100	100

*Teflon is a registered trademark of DuPont.

**Registered trademark of Becton Dickinson

189 Syringe Prefilter, modified acrylic housing; glass-fiber prefilter

For prefiltration and clarification of highly viscous solutions and removal of large particulates from suspensions. Contains no adhesives or binders that can affect results. Inlet: Female Luer-Lok*; Outlet: Male Luer-Lok. Pore size and membrane type printed on unit. Do not autoclave. Non-sterile.

Cat. No.189	-2000
Prefilter Dia., mm	25
No. per Case	50

*Registered trademark of Becton Dickinson.

192 Syringe Prefilter Plus, modified acrylic housing; glass-fiber prefilter; cellulose acetate (CA) membrane

Contains 0.2-µm CA membrane with built-in glass-fiber prefilter for sterilization of highly viscous solutions and/or solutions with high particle loads. Pore size and membrane type printed on unit. Certified sterile, non-cytotoxic and non-pyrogenic. Do not autoclave. Sample volume size: 10-200 ml. Inlet: Female Luer-Lok*; Outlet: Male Luer-Lok. **Sterile**

Cat. No.192	-2520
Membrane Dia., mm	25
Pore Size, µm	0.2
No. per Case	50

*Registered trademark of Becton Dickinson.

190, 191 Syringe Filters, Modified acrylic housing; cellulose acetate (CA) or surfactant-free cellulose acetate (SFCA) membrane

Cat. No. 190-series are packaged in blister packs. Pore size and membrane type are printed on the unit. Sterile version is certified sterile, non-cytotoxic and non-pyrogenic. Do not autoclave. Sample volume size: 10-50 ml. For cold sterilization of aqueous solutions, biological or immunological samples and cell culture media components. Low protein binding, low extractables. SFCA contains no wetting agents. Inlet: Female Luer-Lok*; outlet: Male Luer-Lok. **Sterile**

Sterile

Cat. No.190	-2520	-2545	-2580
Membrane Material	SFCA	SFCA	CA
Membrane Dia., mm	25	25	25
Pore Size, µm	0.2	0.45	0.8
No. per Case	50	50	50

Sterile-Bulk

Cat. No.190	-9920	-9945
Membrane Material	SFCA	SFCA
Membrane Dia., mm	25	25
Pore Size, µm	0.2	0.45
No. per Case	125	125

Non-Sterile-Bulk

Cat. No.191	-2020	-2045	-2080
Membrane Material	SFCA	SFCA	CA
Membrane Dia., mm	25	25	25
Pore Size, µm	0.2	0.45	0.8
No. per Pkg	50	50	50
No. per Case	300	300	300

*Registered trademark of Becton Dickinson.

WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

STERILE

194 Syringe Filters, modified acrylic housing; polyethersulfone (PES) membrane

Certified sterile, non-cytotoxic and non-pyrogenic. Filters come individually blister-packed. Inlet: Female Luer-Lok*: Outlet; Male Luer-Slip. **Sterile**

Cat. No.194	-2520	-2545
Membrane Dia., mm	25	25
Pore Size, µm	0.2	0.45
Filter Sample Volumes, ml	10-50	10-50
No. per Case	50	50

*Registered trademark of Becton Dickinson

A

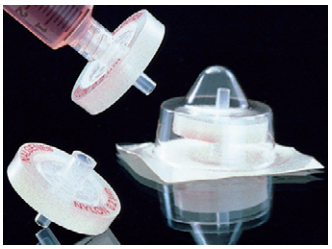
199 Syringe Filters, polypropylene housing; Teflon* PTFE membrane

For filtration of aggressive chemicals, including acids and non-aqueous solvents, such as those used in GC and HPLC. For filtration of air and gases. Wet membrane with alcohol before use with aqueous solutions. Compatible with Zymark® Benchmate™ Systems. Useful for sterile venting with NALGENE reusable filter holders, Cat. Nos. 300, DS0310 and DS0320. Pore size and membrane type printed on unit. Sample volume size: 10-50 ml. Inlet: Female Luer-Lok**; Outlet: Male Luer slip. Non-sterile.
Autoclavable

Cat. No.199	-2020	-2045
Membrane Dia., mm	25	25
Pore Size, µm	0.2	0.45
No. per Pkg	50	50
No. per Case	300	300

*Registered trademark of DuPont.

**Registered trademark of Becton Dickinson.



A STERILE

195, 196 Syringe Filters, nylon membrane; polypropylene housing

For universal filtration of HPLC and GC solvents and DMSO. Chemically-resistant to a wide range of solvents. Inherently hydrophilic, contain no wetting agents or plasticizers. Low level of extractables. Inlet: Female Luer-Lok*; Outlet: Male Luer slip. Compatible with Zymark® Benchmate™ Systems. Sterile version is certified sterile, non-cytotoxic and non-pyrogenic. Pore size and membrane type printed on unit. Sample volume size: 10-50 ml. **Autoclavable/Sterile**

Sterile

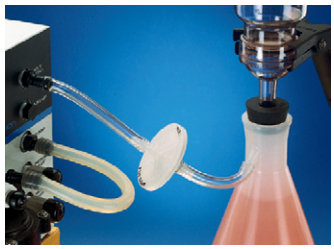
Cat. No.195	-2520	-2545
Membrane Dia., mm	25	25
Pore Size, µm	0.2	0.45
No. per Case	50	50

Non-Sterile

Cat. No.196	-2020	-2045
Membrane Dia., mm	25	25
Pore Size, µm	0.2	0.45
No. per Pkg	50	50
No. per Case	300	300

*Registered trademark of Becton Dickinson.

DS0222 Syringe/In-Line Filters, polypropylene housing; Teflon* PTFE membrane



For filtration of aggressive chemicals, including acids and non-aqueous solvents, such as those used in GC and HPLC. For filtration of air and gases. Wet membrane with alcohol before use with aqueous solutions. Help meet OSHA standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. Useful for benchtop fermenters, in-line gas filtration for sterile air or CO_2 and to protect vacuum pumps from damage by aqueous solutions. Suitable for use with NALGENE filling/venting closures, Cat. Nos. 2162 and 2164. Pore size and membrane type printed on unit. Sample volume size: 0.2-5.0 L. Inlet/Outlet: Stepped hose barb accepts 1/4- to 3/8-inch (6- to 9-mm) I.D. tubing. Non-sterile. **Autoclavable/Biohazard**

Cat. No.DS0222	-0020	-0045
Membrane Dia., mm	50	50
Pore Size, µm	0.2	0.45
No. per Case	10	10

*Registered trademark of DuPont.

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468 Capsule Filter, (PES) polyethersulfone membrane, polypropylene housing

The low protein binding PES membrane is ideal for cell culture media. 500cm^2 membrane surface area permits rapid filtration of 5 to 50 liters of fluid. Attached 67mm diameter clear filling bell on outlet reduces splatter and helps maintain sterile technique. Vent maximizes recovery of unfiltered fluid and minimizes air locking. Operates with 1/4 turn. Stepped hose barb inlet and outlet fits standard 6-12 mm (1/4-1/2 in.) I.D. diameter tubing. Maximum operating conditions: 72 psi (5 bar) @ 40°C. Catalog number and lot number printed on each capsule for easy reordering and traceability. Each capsule filter is double bagged. **Sterile/Autoclavable**

- Used to filter large volumes of media, buffer or salt solutions
- Scale up from the bench top to pre-production or production
- Asymmetric PES membrane gives faster flow than normal PES to quickly and easily process up to 50 liters of fluid

Not Available in Europe

Cat. No.468	-5020
Pore size, µm	0.2
Membrane surface area, cm2	500
No. per Case	3

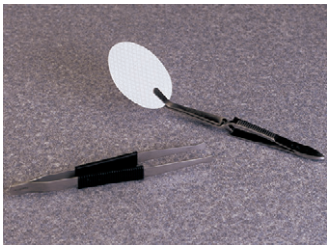
WARNING! All NALGENE Filterware is for research use only, not for *in vitro* diagnosis or parenterals.

A

DS0390 Filling Bell, polycarbonate; polypropylene tubing adapter

Transparent, autoclavable filling bell for use in sterile work areas of microbiology and cell culture labs. Ideal for transferring sterile media aseptically from large containers to media bottles or culture vessels. Polycarbonate filling bell is durable, nontoxic and will not shatter. Costs much less than glass. Fits all common media bottles. Autoclavable polypropylene tubing adapter accepts 1/4-, 3/8-, and 1/2-in. (6.3-, 9.5-, and 12.7-mm) I.D. tubing. **Autoclavable/Transparent**

Cat. No.DS0390	-0070
Overall Height w/adapter, mm	114
Overall Height w/adapter, in.	4-1/2
Bell I.D., mm	70
Bell I.D., in.	2-7/8
Inner Fill Tube: Length, mm	63
Inner Fill Tube: Length, in.	2-1/2
Inner Fill Tube: Bottom O.D., mm	9
Inner Fill Tube: Bottom O.D., in.	3/8
Inner Fill Tube: Bottom, I.D., mm	5
Inner Fill Tube: Bottom, I.D., in.	1/4
No. per Case	1



A

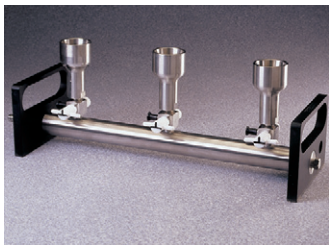
DS0399 Filter Forceps, stainless steel

Durable, autoclavable construction. Designed to allow manipulation of membranes while minimizing potential damage to the membrane. Available in bent-tip and straight-tip designs. Bent-tip forceps (Cat. No. DS0399-0001) feature a unique cross-action design that lets you hold membrane without applying constant pressure. **Autoclavable**

Cat. No.DS0399	-0001	-0002
Style	Bent Tip	Straight Tip
No. per Case	1	1

DS0345 Vacuum Manifold, stainless steel; Teflon* PTFE stopcock

Solid and stable on the benchtop. Designed with three vacuum outlets, each with leakproof, two-way valve and vent port. Each outlet securely holds a No. 8 stopper and the stem of a filter funnel without interference. Outlets are spaced for easy manipulation of individual funnels. Teflon stopcock on each valve shuts off flow when fewer than three outlets are used. Barbed fitting accepts 3/8-in. (9.5-mm) I.D. tubing. For simultaneous filtrations with increased filtrate volume in particulate and microbial analysis, use with NALGENE filter funnel with clamp, Cat. No. DS0315-0047, a complete filtration system. May also be used with NALGENE analytical filter funnel, Cat. Nos. 140, 145 and 147, and filter holder with funnel, Cat. Nos. DS0310-4000, DS0310-4050. **Autoclavable**



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Cat. No.DS0345	-0001
No. per Case	1

*Or equivalent. Teflon is a registered trademark of DuPont.

DS0405 Bubble Point Test Apparatus, cast aluminum

Test the bubble point of 50-, 75- and 90-mm NALGENE MF75 filter unit membranes without removing the membrane from the filter unit. Testing the bubble point helps assure product integrity. Can test all 50-, 75- and 90-mm-diameter NALGENE MF75 0.2-µm and 0.45-µm disposable filter units and bottle top filters from 150 ml to 1 L. Accepts 1/4-inch (6-mm) I.D. tubing. Adapters and O-rings included for use with 75- and 90-mm sizes. Customer must supply a pressure source and calibrated gauge.

Cat. No.DS0405	-0050
No. per Case	1

For information on membrane filter validation, or to receive your free copy of our certification guide, in North America contact NNI Technical Services, Fax: 1-800-NALGENE

Filterware/Chemical Resistance for Membranes and Housings

This chemical resistance information is intended as a general guide only. For more complete information, visit our web site. Since actual chemical resistance depends on many variables, such as temperature, pressure and length of exposure, you may want to test under your own conditions.

Key:
- S - Satisfactory
- M - Marginal, may be satisfactory for short-term contact and/or small volume filtration. Trial testing is advised.
- U - Unsatisfactory
- — - No data available

- C.A. - Cellulose acetate
- C.N. - Cellulose nitrate
- SFCA - Surfactant-free cellulose acetate
- GFP - Glass-fiber prefilter
- HDPE - High Density Polyethylene
- NYL - Nylon
- aPES - Pall Supor®** mach V PES

- PES - Polyethersulfone
- PTFE - Teflon PTFE
- PS - Polystyrene
- PSF - Polysulfone
- ACR - Acrylic
- PP - Polypropylene
- PVDF - Polyvinylidene fluoride

		Membranes							Housings				
	Chemicals	C.N.*	C.A./ SFCA	GFP	NYL	aPES/ PES	PTFE	PVDF	HDPE	PS	PSF	ACR	PP
Acids	Acetic acid, 25 %	S	M	M	M	S	S	S	S	M	M	M	S
	Acetic acid, 100% (glacial)	U	U	M	M	M	S	S	S	U	U	U	S
	Formic acid, 25%	S	M	S	U	S	S	S	S	U	M	M	S
	Formic acid, 100%	M	U	S	U	M	S	S	S	U	U	U	S
	Hydrochloric acid, 25%	U	U	S	U	S	S	S	S	S	M	M	S
	Hydrochloric acid, 37% (conc.)	U	U	S	U	S	S	S	S	M	U	M	S
	Nitric acid, 25%	M	M	M	U	U	S	M	S	U	M	M	S
	Nitric acid, 60%	U	U	S	U	U	S	U	M	U	U	U	M
	Phosphoric acid, 25%	S	S	—	U	—	S	S	S	M	S	M	S
	Sulfuric acid, 25%	S	M	S	U	U	S	S	S	S	S	S	S
	Sulfuric acid, 98% (conc.)	U	U	M	U	U	S	U	M	U	U	U	M
Alcohols	Amyl alcohol	S	S	S	S	U	S	S	S	M	M	M	S
	Benzyl alcohol	M	M	S	S	U	S	S	M	U	U	U	S
	Ethanol (ethyl alcohol), 70%	M	S	S	S	U/S	S	S	S	M	S	U	S
	Ethanol (ethyl alcohol), 98%	U	S	S	S	U/S	S	S	S	M	M	U	S
	Ethylene glycol	M	S	S	S	M/S	S	S	S	S	S	M	S
	Glycerol	S	S	S	S	M/S	S	S	S	S	S	M	S
	Isopropanol	M	S	S	S	M/S	S	S	S	S	M	U	S
	Methanol (methyl alcohol), 98%	U	S	S	S	M/S	S	S	S	M	M	U	S
	n-Propanol (propyl alcohol)	M	M	S	S	M/S	S	S	S	S	M	U	S
	Phenol	U	U	S	S	U	S	M	U	U	U	U	U
	Propylene glycol	U	M	S	S	M/S	S	S	S	S	M	M	S
Bases	Ammonium hydroxide, 25%	U	M	U	S	U	S	M	S	M	U	S	S
	Ammonium hydroxide, 1N	S	S	S	S	S	S	S	S	S	S	S	S
	Potassium hydroxide, 1N	U	U	S	S	S	S	S	S	S	M	S	S
	Sodium hydroxide, 5%	U	M	S	S	S	S	S	S	S	M	S	S
	Sodium hydroxide, 1N	U	M	S	S	U/M	S	S	S	S	S	S	S
	Sodium hydroxide, 6N	U	U	M	M	U/M	S	U	S	S	U	S	S
Esters	Amyl acetate	U	M	S	S	U	S	M	S	U	U	U	S
	Benzyl benzoate	S	S	S	S	U	S	M	M	U	U	U	M
	Butyl acetate	U	M	S	S	U	S	M	S	U	U	U	M
	Ethyl acetate, Methyl acetate	U	U	S	S	U	S	M	M	U	U	U	M
	2-Ethoxyethyl acetate	U	U	S	S	S	S	—	S	—	U	—	S
	Methyl cellosolve acetate	U	U	S	U	S	S	U	—	U	U	M	M
	Propyl acetate	U	M	S	S	U	S	M	S	U	U	U	M
Hydrocarbons (aliphatic)	Gasoline	S	S	S	S	M	S	S	M	U	U	U	M
	Hexane	S	S	S	S	U	S	S	S	U	M	M	M
	Kerosene	S	S	S	S	S	S	S	M	U	M	U	M
Hydrocarbons (aromatic)	Toluene	S	S	S	S	U/M	S	S	U	U	U	U	M
	Xylene	S	S	S	S	U	S	S	M	U	U	U	M
Hydrocarbons (halogenated)	Carbon tetrachloride	S	M	S	S	U	S	S	S	U	U	U	M
	Chloroform	S	U	S	S	U	S	S	M	U	U	U	U
	Freon	S	S	S	S	M	S	S	S	U	U	U	M
	Methylene chloride	M	U	S	S	U	S	S	M	U	U	U	M
	Monochlorobenzene	S	S	S	S	U	S	S	U	U	U	U	U
	Perchloroethylene	S	S	S	S	M	S	S	U	U	U	U	M
	1,1,1-Trichloroethane	M	U	S	S	M	S	S	M	U	U	U	U
	1,1,2.-Trichloroethane	U	U	S	S	M	S	S	M	U	U	U	U
	Trichloroethylene	S	U	S	S	S/S	S	S	U	U	U	U	M
Ketones	Acetone	U	U	S	S	U	S	U	U	U	U	U	M
	Cyclohexanone	U	U	S	S	U	S	M	M	U	U	U	M
	Methyl ethyl ketone	U	U	S	S	U	S	U	U	U	U	U	M
Miscellaneous	Acetonitrile	U	U	S	S	M	S	S	S	U	U	U	S
	Acrylamide	S	S	S	S	S	S	S	S	S	S	S	S
	Dimethylsulfoxide (DMSO)	U	U	S	S	U	S	U	S	M	U	U	S
	Dioxane	U	U	S	S	M	S	M	S	U	U	U	S
	Ethyl ether	M	M	S	S	S	S	S	M	U	U	U	M
	Formaldehyde, 30%	S	M	S	S	S	S	S	S	U	M	U	S
	Hydrogen peroxide, 30%	U	S	S	S	—	S	S	S	S	S	M	S
	Methyl cellosolve	U	U	S	S	—	S	S	—	U	U	U	S
	Pyridene	U	U	S	M	U	S	U	U	U	U	U	U
	Tetrahydrofuran	U	U	S	S	U	S	U	M	U	U	U	U

*Do not use C.N. membranes for EDTA or TRIS.

** Supor is a registered trademark of Pall Corp.

Flasks

4112 Sterile Disposable Flasks, Plain Bottom, PETG (polyethylene terephthalate copolyester), white high-density polyethylene (HDPE) closure

Sterile disposable flasks reduce the chance for cross contamination. Ideal for shaker and suspension cell culture, media preparation or storage. Made of light, crystal clear PETG. Molded-in graduations. Leak-proof high-density polyethylene screw closures open to vent with 1/4 turn. Flasks offer a 5-year shelf life, a 10^{-6} SAL, are non-pyrogenic and non-cytotoxic. Individually packaged for easy storage and handling. Also available with baffled bottom (Cat. No. 4113) for use on the bench top or shaker table. NALGENE sterile vented closures (Cat. No. 4114) are available for this product. **Sterile**

Plain Bottom

Cat. No.4112	-0125	-0250	-0500	-1000	-2000	-2800
Cap., ml	125	250	500	1000	2000	2800
Closure size, mm	38-430	38-430	45-430	45-430	45-430	70
No. per Case	24	12	12	6	4	4

STERILE

4113 Sterile Disposable Flasks, Baffled Bottom, PETG (polyethylene terephthalate copolyester), high-density polyethylene (HDPE) closure

Sterile disposable flasks reduce the chance for cross contamination. Ideal for shaker and suspension cell culture, media preparation or storage. Made of light, crystal clear PETG plastic. Molded-in graduations. Leak-proof high-density polyethylene screw closures open to vent with 1/4 turn. Flasks offer a 5-year shelf life, a 10^{-6} SAL, are non-pyrogenic and non-cytotoxic. Individually packaged for easy storage and handling. Also available with plain bottom (Cat. No. 4112). See also NALGENE vented closures (Cat. No. 4114), available separately. **Sterile**

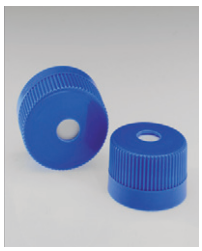
Baffled Bottom

Cat. No.4113	-0125	-0250	-0500	-1000	-2000	-2800
Cap., ml	125	250	500	1000	2000	2800
Closure size, mm	38-430	38-430	45-430	45-430	45-430	70
No. per Case	24	12	12	6	4	4

*Fernbach shape

STERILE

4114 Vented Closures for Sterile Disposable Erlenmeyer Flasks, blue high-density polyethylene, PTFE membrane



Vented Closures provide sterile gas exchange for shaker and suspension cell culture. Hydrophobic 0.2µm PTFE membrane allows sterile air exchange without unscrewing the closure and is heat welded into place for effective sealing. Made of blue HDPE for easy identification. Use with NALGENE Sterile Disposable flasks (Cat. Nos. 4112 and 4113). **Sterile**

Cat. No.4114	-0038	-0045
Fits	125, 250 ml flasks	500, 1000, 2000 ml flasks
Closure No.	38-430	45-430
No. per Case	12	12

STERILE

STERILE

4115 Sterile Disposable Flasks, Plain Bottom, vented closure, PETG (polyethylene terephthalate copolyester), high-density polyethylene (HDPE) .2µm closure

Sterile disposable flasks reduce the chance for cross contamination. Ideal for shaker and suspension cell culture, media preparation or storage. Made of light, crystal clear PETG. Molded-in graduations. High-density polyethylene closure has a hydrophobic 0.2µm PTFE membrane that allows sterile air exchange. Flasks offer a 5-year shelf life, a 10^{-6} SAL, are non-pyrogenic and non-cytotoxic. Individually packaged for easy storage and handling. Also available with baffled bottom (Cat. No. 4116) for use on the bench top or shaker table. **Sterile**

Plain Bottom with Vented Closures

Cat. No.4115	-0125	-0250	-0500	-1000	-2000	-2800
Cap., ml	125	250	500	1000	2000	2800
Closure size, mm	38-430	38-430	45-430	45-430	45-430	70
No. per Case	24	12	12	6	4	4

STERILE

4116 Sterile Disposable Flasks Baffled Bottom, Vented Closure, PETG (polyethylene terephthalate copolyester), high-density polyethylene), high-density polyethylene (HDPE) .2µm closure

Sterile disposable flasks reduce the chance for cross contamination. Ideal for shaker and suspension cell culture, media preparation or storage. Made of light, crystal clear PETG plastic. Molded-in graduations. High-density polyethylene closure has a hydrophobic 0.2µm PTFE membrane that allows sterile air exchange. Flasks offer a 5-year shelf life, a 10^{-6} SAL, are non-pyrogenic and non-cytotoxic. Individually packaged for easy storage and handling. Also available with plain bottom (Cat. No. 4115).
Sterile

Baffled Bottom with Vented Closure

Cat. No.4116	-0125	-0250	-0500	-1000	-2000	-2800
Cap., ml	125	250	500	1000	2000	2800
Closure size, mm	38-430	38-430	45-430	45-430	45-430	70
No. per Case	24	12	12	6	4	4

A

4110 Baffled Flasks, polycarbonate

Break-resistant flasks provide an alternative to glass flasks and produce equivalent growth curves with *E. coli* and *S. cerevisiae*. Baffles increase mixing. Polycarbonate has excellent mechanical strength. 500- and 1000-ml sizes feature a straight neck design that accepts standard 38-mm stainless steel or plastic closures. **Autoclavable/Transparent/Graduated**

Cat. No.4110	-0250	-0500	-1000	-2000
Cap., ml	250	500	1000	2000
No. per Pkg	4	4	2	2
No. per Case	12	12	6	4

A

4105 Fernbach Culture Flask, polycarbonate

Provides the wide surface area desirable for culturing microorganisms in liquid media, increasing aeration for better growth. Break-resistant, transparent polycarbonate has excellent mechanical strength. For a leakproof seal, use No. 13 rubber stopper (68-mm top dia. x 58-mm bottom dia. x 25-mm length).
Autoclavable/Transparent

Cat. No.4105	-2800
Cap., L	2.8
Cap., oz.	95
Diameter, Base, mm	203
Diameter, Base, in.	8
Height, mm	229
Height, in.	9
No. per Pkg	1
No. per Case	4

DS4101 Filtering Flasks, polypropylene

Molded in one piece to withstand full vacuum to 30-in. Hg. Tubulation at 45° angle prevents tipping. Barbed adapter accepts 1/4- to 3/8-in. I.D. tubing. Cat. No. DS4101-2000 is graduated. Oval marking area. **Autoclavable**

A

Cat. No.DS4101	-0500	-1000	-2000
Cap., ml	500	1000	1700
Fits Tubing I.D., in.	1/4 to 3/8	1/4 to 3/8	3/8
Fits Tubing I.D., mm	6.4 to 9.5	6.4 to 9.5	9.5
Stopper No.	7	8	10
No. per Case	1	1	1

4102 Erlenmeyer Flasks, polypropylene

For general laboratory use. Cat. No. 4102-2000 has molded-in graduations. Liquid level easily visible. **Autoclavable**

A

Cat. No.4102	-0050	-0125	-0250	-0500	-1000	-2000
Cap., ml	50	125	250	500	1000	2000
Stopper No.	1	3	6	7	8	10
No. per Pkg	12	12	6	4	2	2
No. per Case	36	24	12	12	6	6

4103 Erlenmeyer Flasks, polycarbonate

Use for preparation and storage of culture media and many culturing techniques. Far safer than glass flasks for use in shakers. Repeated autoclaving may result in some loss in mechanical strength. **Autoclavable/Transparent/Graduated**

A

Cat. No.4103	-0050	-0125	-0250	-0500	-1000
Cap., ml	50	125	250	500	1000
Stopper No.	1	5	6	7	9
No. per Pkg	12	12	6	4	2
No. per Case	36	24	12	12	6

4104 Wide-Mouth Erlenmeyer Flask, polycarbonate

Suitable for titrations, culture work and other applications where a wide-mouth flask is desirable. Transparent and autoclavable. Repeated autoclaving may result in some loss in mechanical strength. Graduated in 25-ml increments. **Autoclavable/Transparent/Graduated**

A

Cat. No.4104	-0250
Cap., ml	250
Stopper No.	8
No. per Pkg	6
No. per Case	12

Flasks

A

4108 Erlenmeyer Flasks with Screw Closure, polycarbonate; polypropylene closure

Use for preparation and storage of culture media and many culturing techniques. Far safer than glass flasks for use in shakers. Closures are linerless, noncontaminating. Flasks and closures are autoclavable, but polycarbonate shows some loss of mechanical strength after repeated autoclaving. Before autoclaving, set closure on top of the container without engaging the threads.

Autoclavable/Transparent

Cat. No.4108	-0050	-0125	-0250	-0500	-1000
Cap., ml	50	125	250	500	1000
Closure Size, mm	24	33	38	43	53
No. per Pkg	6	6	4	4	2
No. per Case	24	24	12	12	6

Teflon FEP A

4106 Erlenmeyer Flasks with Screw Closure, Teflon* FEP, Tefzel* ETFE closure

Combine the excellent chemical resistance of Teflon* FEP with the convenience of a screw closure. They're unbreakable, nearly transparent, non-contaminating, and resist virtually all chemicals. Withstand temperatures from -270°C to +205°C; closures from -100°C to +150°C. Can be autoclaved or chemically sterilized repeatedly. Before autoclaving, just set cap or closure on top of the container without engaging the threads. Useful with all organic solvents, concentrated oxidizing agents. Can be boiled in concentrated nitric acid for trace metal work. **Teflon FEP/Autoclavable**

*Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

Cat. No.4106	-0050	-0125	-0250
Cap., ml	50	125	250
Closure Size, mm	24	33	38
No. per Pkg	1	1	1
No. per Case	4	4	4

A

EARN

4109 Erlenmeyer Flasks with Screw Closure, polymethylpentene; polypropylene closure

An excellent combination of clarity, chemical resistance, impact strength and autoclavability. Very transparent to microwave radiation. All sizes are graduated. Use for titrations, preparation and storage of culture media. Before autoclaving, just set cap or closure on top of the container without engaging the threads. **Autoclavable/Transparent**

Cat. No.4109	-0125	-0250	-0500	-1000
Cap., ml	125	250	500	1000
Closure Size, mm	33	38	43	53
No. per Pkg	6	4	4	2
No. per Case	24	12	12	6

A

4000 Volumetric Flasks, polypropylene; polypropylene screw closure

The accuracy of standard glass flasks combined with the break resistance of plastic. Gravimetrically calibrated individually TC/TD at 20°C. Printing is durable; won't wear off. Guaranteed to meet the Class B accuracy requirements of ASTM E288 and ISO Standard 384. No meniscus to confuse readings. Oval marking spot. Cat. No. 4000-0200 has additional line at 203-ml level for BOD and DO determinations. Can be autoclaved, but accuracy will be affected. Before autoclaving, set closure on top of the container without engaging the threads. **Autoclavable/Graduated/Leakproof**

Cat. No.4000	-0050	-0100	-0200	-0250	-0500	-1000
Cap., ml	50	100	200	250	500	1000
Closure Size, mm	13	20	20	20	24	28
Limit of Error, ml	±0.10	±0.16	±0.20	±0.24	±0.40	±0.60
Ht., With Closure, mm	146	184	209	222	279	317
No. per Pkg	1	1	1	1	1	1
No. per Case	12	12	12	12	8	6

4001 Volumetric Flasks, polymethylpentene; polypropylene screw closure

The accuracy of standard glass flasks combined with the break resistance of plastic. Individually calibrated gravimetrically TC/TD at 20°C. Printing is durable; won't wear off. Guaranteed to meet the Class B accuracy requirements of ASTM E288 and ISO Standard 384. No meniscus to confuse readings. Translucent. Can be autoclaved, but accuracy will be affected. Before autoclaving, set closure on top of the container without engaging the threads. **Autoclavable/Graduated/Leakproof**

Cat. No.4001	-0050	-0100	-0250	-0500	-1000
Cap., ml	50	100	250	500	1000
Closure Size, mm	13	20	20	24	28
Limit of Error, ml	±0.10	±0.16	±0.24	±0.40	±0.60
Ht., With Closure, mm	146	184	222	279	317
No. per Pkg	1	1	1	1	1
No. per Case	12	12	12	8	6

A

Funnels

4300 Separatory Funnels, polypropylene; Teflon* TFE stopcock and housing; polypropylene screw closure

Phase interface visible down to stopcock. Polypropylene funnel and screw closure are chemically inert, translucent, autoclavable and have no known solvents at room temperature. They are susceptable to softening and swelling from strong oxidizers and aggressive solvents. TFE stopcock assembly has excellent chemical resistance, is leakproof and does not require lubrication. Disinfect chemically.

Autoclavable/Leakproof *Or equivalent. Teflon is a registered trademark of DuPont.

Cat. No.4300	-0125	-0250	-0500	-1000
Cap., ml (nom.)	125	250	500	1000
Closure Size, mm	28	33	43	53
Stem Length Below Stopcock, mm	65	65	65	65
No. per Pkg	1	1	1	1
No. per Case	6	4	4	4

A

4301 Separatory Funnels, Teflon* FEP; Teflon TFE stopcock; Tefzel* ETFE screw closure

Break-resistant, transparent, non-stick for easy cleaning, non-wetting for complete draining, and impervious to any chemical used in a separatory funnel. Economical answer to continual replacement of fragile, expensive glass funnels. Phase interface of even colorless liquids is visible. Can be used with mechanical shakers if a hose clamp is put over stopcock insertion area. Leakproof closure and stopcock. Stopcock assembly is easily removed for cleaning. Phthalate-free. Funnels are autoclavable except for stopcock assembly, which can be chemically disinfected. **Autoclavable/Leakproof/Teflon FEP**

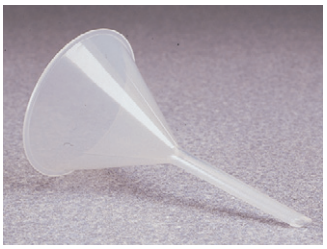
*Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

Cat. No.4301	-0125	-0250	-0500	-1000	-2000
Cap., ml (nom.)	125	250	500	1000	2000
Closure Size, mm	28	33	43	53	53
Stem Length Below Stopcock, mm	65	65	65	65	65
No. per Pkg	1	1	1	1	1
No. per Case	4	4	4	4	2

Teflon FEP

A

Funnels



A

4250 Analytical Funnels, polypropylene

For standard filter papers. Body is at 60° angle with internal ribs at 58° for rapid filtration. Outside ribbing eliminates air lock. **Autoclavable**

Cat. No.4250	-0035	-0045	-0055	-0065	-0075	-0090	-0100	-0160
Funnel Top, I.D., mm	34	48	55	66	77	92	104	158
Stem O.D., mm	6	7	7	7	7	8	9	14
Length of Stem, mm	52	50	61	65	80	88	99	151
Overall Height, mm	78	85	105	116	145	163	183	276
Cap., ml	10	23	41	65	114	173	254	976
Paper Dia., mm	55	70	90	110	125	150	185	240
No. per Pkg	12	12	12	12	6	6	4	2
No. per Case	36	36	36	36	36	24	24	12

A

4251 Analytical Funnel, Teflon* PFA

For ultra-pure liquid transfer in environmental, biomedical and electronics applications. Excellent chemical resistance and no risk of phthalate contamination. Translucent. **Autoclavable**

Cat. No.4251	-0057	-0077
Funnel Top, I.D., mm	57	77
Stem I.D., mm	5	7
Length of Stem, mm	30	80
Overall Height, mm	78	145
Cap., ml	45	114
No. per Case	1	1

*Or equivalent. Teflon is a registered trademark of DuPont.

A

4252 Powder Funnels, polypropylene

For transferring powders. Parallel stem minimizes bridging of powder; external ribbing prevents air lock. Fast and efficient. **Autoclavable**

Cat. No.4252	-0065	-0080	-0100	-0150
Funnel Top, I.D., mm	65	79	104	147
Stem O.D., mm	16	16	21	27
Length of Stem, mm	22	29	33	30
Overall Height, mm	67	85	106	136
Cap., ml	68	115	243	716
No. per Pkg	12	12	6	4
No. per Case	36	36	24	24

4256 Utility Funnels, polypropylene or high-density polyethylene

Numerous lab applications. Cat. No. 4256-0638 funnel has large throat opening for faster transfer of materials. Cat. Nos. 4256-0234, 4256-0314 and 4256-0414 are molded of autoclavable PP; Cat. Nos. 4256-0500, 4256-0638 and 4256-0800 of HDPE and are not autoclavable.

Cat. No.4256	-0234	-0314	-0414	-0500	-0638	-0800
Funnel Top, I.D., mm	65	84	103	122	155	205
Stem O.D., mm	10	9	11	13	26	20
Length of Stem, mm	21	23	34	44	67	47
Overall Height, mm	65	94	117	144	176	202
Cap., ml	62	150	270	447	1059	1863
No. per Pkg	12	12	12	12	12	12
No. per Case	288	288	144	144	72	48

4262 Large Funnels, high-density polyethylene

Internal and external ribbing for air release.

Cat. No.4262	-0080	-0110
Funnel Top, I.D., mm	201	258
Stem O.D., mm	23	21
Length of Stem, mm	89	92
Overall Height, mm	245	300
Cap., ml	1899	4064
No. per Pkg	1	1
No. per Case	6	6

4260 Heavy-Duty Funnels, low-density or high-density polyethylene

Rigid construction, ideal for vacuum filtration. Four larger sizes are constructed with ribs and a tab. Cat. No. 4260-0120 is molded of HDPE, making it the toughest large funnel available. Cat. Nos. 4260-0020, -0030, -0040, -0060, -0100 are LDPE.

Cat. No.4260	-0020	-0030	-0040	-0060	-0100	-0120
Funnel Top, I.D., mm	52	76	101	152	248	343
Stem O.D., mm	10	11	12	15	23	33
Length of Stem, mm	39	40	72	76	117	191
Overall Height, mm	71	99	146	196	319	445
Cap., ml	29	104	254	777	3684	6976
No. per Pkg	6	6	2	1	1	1
No. per Case	18	18	12	12	2	2

4280 Büchner Funnels, polypropylene

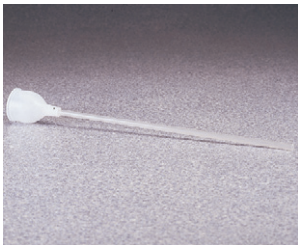
Lightweight and durable. Bottom and top can be separated for easier cleaning. **Autoclavable**

Cat. No.4280	-0550	-0700	-0900	-1100	-1500
Funnel Top, I.D., mm	59	76	93	130	172
Stem O.D., mm	10	11	12	22	20
Length of Stem, mm	45	65	71	93	107
Overall Height, mm	104	146	169	213	283
Cap., ml	83	186	358	919	2906
Filter Paper Size, mm	55	70	90	110	150
No. per Pkg	1	1	1	1	1
No. per Case	8	6	4	4	4

A

6210 Safety Thistle Tube, low-density polyethylene; polypropylene tubing

Shatterproof thistle tube funnel. Top opening is 29 mm (1-1/8 in.). Total length is 343 mm (13-1/2 in).



Cat. No.6210	-0010
No. per Pkg	12
No. per Case	72

Hydrometers

3630 Plain-Form Hydrometers, polycarbonate

Safe, break-resistant alternatives to glass hydrometers. Polycarbonate (PC) offers glass-like clarity. Individually calibrated to meet National Institute of Standards and Technology tolerances of accuracy. Excellent for food, beverage and other testing. Available in three specific gravity (SG*) ranges for fluids heavier than water. Use with NALGENE hydrometer jar (Cat. No. 6230). **Graduated**

Cat. No.3630	-0100	-1000	-1200	-1400
Type	Salt	SG*	SG*	SG*
Range	0-100%	1.000-1.220	1.200-1.420	1.400-1.620
Division	1.0	0.002	0.002	0.002
Approx. Length, mm	285	290	305	305
No. per Pkg	1	1	1	1
No. per Case	12	12	12	12

*Specific Gravity.

A

6230 Hydrometer Jar, polymethylpentene

One-piece unit is transparent, has superior chemical resistance and an upper temperature limit of 135°C. Broad base provides good stability. Also suitable for use as a lactometer cylinder. O.D. is 50.8 mm (2 in.). **Autoclavable/Transparent**

Cat. No.6230	-0500
Cap., ml	500
Height, mm	390
Height, in.	14-1/2
No. per Pkg	1
No. per Case	6

Jars

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

A

2115 Mason Jars, polypropylene; white polypropylene screw closure

These durable jars have 70-mm necks which take fixtures or closures with Mason jar threads. Can also be used with Osterizer and other blenders with Mason jar threads. Also handy for fluid transfer in the lab or field when used with NALGENE fluid-transfer closure, Cat. No. DS2153. Refer to that product description for guidelines. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. **Autoclavable**

Cat. No.2115	-0500	-1000	-2000	-3000
Cap., ml	500	1000	2000	3000
Cap., oz.	16	32	64	96
No. per Pkg	6	6	4	1
No. per Case	24	24	12	6

DS2153 Fluid-Transfer Closure, polypropylene

Use this 70-mm closure with 500-, 1000-, 2000- and 3000-ml NALGENE Mason jars (Cat. No. 2115) for fluid transfer in the lab or field, or with NALGENE straight-sided jars (Cat. Nos. 2116, 2117, 2118, and 2119) with 70mm closures. Containers sold separately. Use for siphoning, evacuation, bleeding of fluid lines, collecting samples, transferring reagents. Two vent tubes, molded into top of closure, connect to external fluid source and to vacuum or pressure pump with 1/4-in. I.D. flexible tubing, e.g. NALGENE 180. Caution: Not designed for use under full vacuum or high pressure. Vacuum limit: 5 in. (127 mm) Hg; pressure limit: 2 psig (.137 bar). **Autoclavable**

A

Cat. No.DS2153	-0700
Size, mm	70
No. per Case	6

2116 Straight-Side Wide-Mouth Jars, transparent with white PP closure

Window-clear, transparent blue or green (125ml to 1000ml sizes). High impact resistance. Nontoxic. Excellent for cold room and refrigerated use. NOTE: Before autoclaving, completely remove cap or closure and set on top of the container at an angle without engaging the threads. Repeated autoclaving will shorten jar life. **Autoclavable/L900/Transparent**

A

CLEAR with white PP Closure

Cat. No.2116	-0015	-0030	-0060	-0125	-0250	-0500	-1000
Cap., ml	15*	30*	60*	125	250	500	1000
Cap., oz.	1/2	1	2	4	8	16	32
Closure Size, mm	38	43	53	70	70	120*	120*
No. per Pkg	4	4	4	4	4	4	4
No. per Case	48	48	48	24	24	16	16

*Natural PP closure

BLUE with white PP Closure

Cat. No.2116	-1004	-1008	-1016	-1032
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	70	70	120	120
No. per Pkg	4	4	4	4
No. per Case	24	24	16	16

GREEN with white PP Closure

Cat. No.2116	-2004	-2008	-2016	-2032
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	70	70	120	120
No. per Pkg	4	4	4	4
No. per Case	24	24	16	16

2119 Straight-Side Wide-Mouth Jars, gray polycarbonate; white polypropylene screw closure

High impact resistance. Non-toxic. Excellent for cold room and refrigerated use. Gray polycarbonate. NOTE: Before autoclaving, completely remove cap or closure and set on top of the container at an angle without engaging the threads. **Autoclavable/L900**

A

Cat. No.2119	-0125	-0250	-0500	-1000
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	70	70	120	120
No. per Pkg	4	4	4	4
No. per Case	24	24	16	16

NOTE: NALGENE® LDPE, HDPE, PP and PMP containers can be used for long-term storage, but direct UV exposure should be avoided.

A

2117 Straight-Side Wide-Mouth Jars, polymethylpentene; white polypropylene screw closure

Autoclavable jars offer clarity with good chemical resistance. They make excellent museum jars; formaldehyde loss is only 2% per year. Meets requirements of CFR21, Part 177.1520 for food and beverage use. NOTE: Before autoclaving, completely remove closure and set on top of the container at an angle without engaging the threads. For 16oz and 32oz jars, remove closure and autoclave separately. **Autoclavable**

Cat. No.2117	-0060	-0125	-0250	-0500	-1000
Cap., ml	60	125	250	500	1000
Cap., oz.	2	4	8	16	32
Closure Size, mm	53	70	70	120*	120*
No. per Pkg	4	4	4	4	4
No. per Case	48	24	24	16	16

*Natural PP closure

A

2118 Straight-Side Wide-Mouth Jars, polypropylene; white polypropylene screw closure

Translucent jars are repeatedly autoclavable, with excellent chemical resistance. NOTE: Before autoclaving, completely remove closure and set on top of the container at an angle without engaging the threads. For 16oz and 32oz jars, remove closure and autoclave separately. **Autoclavable**

Cat. No.2118	-9050	-0001	-0002	-0004	-0008	-0016	-0032
Cap., ml	15*	30*	60*	125	250	500	1000
Cap., oz.	1/2	1	2	4	8	16	32
Closure Size, mm	38	43	53	70	70	120*	120*
No. per Pkg	12	12	12	12	6	6	6
No. per Case	72	72	48	36	36	24	24

*Natural PP closure

5350 Jars with Cover, high-density polyethylene

For storing and transporting solids. Larger sizes make excellent waste crocks.

Cat. No.	Brim Cap. (approx.)	O.D. x H, mm	O.D. x H, in.	No. per Pkg	No. per Case
5350-0001	1100 ml; 1-1/8 qt.	132 x 105*	5-1/8 x 4-1/8	1	6
5350-0002	2.1 L; 2-1/4 qt.	132 x 190*	5-1/8 x 7-1/2	1	6
5350-0010	4.4 L; 1-1/8 gal.	168 x 237*	6-5/8 x 9-3/8	1	6

*With cover.

A

5352 Jars with Cover, polypropylene

For storing and transporting solids. Larger sizes make excellent waste crocks. **Autoclavable**

Cat. No.	Brim Cap. (approx.)	O.D. x H, mm	O.D. x H, in.	No. per Pkg	No. per Case
5352-0001	1200 ml; 1-1/4 qt.	132 x 105*	5-1/4 x 4-1/8	1	6
5352-0002	2.2 L; 2-1/4 qt.	132 x 193*	5-1/4 x 7-1/2	1	6
5352-0004	4.6 L; 4-7/8 qt.	168 x 239*	6-5/8 x 9-3/8	1	6

*With cover.

DS5300 Multipurpose Jars with Covers, polycarbonate

Useful as water baths, aquaria, terraria or freeze-drying chambers. You can drill, tap or apply clamps to attach heating or cooling equipment. Covers permit jars to be stacked. Cat. Nos. DS5300-0504; DS5300-0507 may be used for vacuum service if not autoclaved. For vacuum service, see Cat. Nos. 5305 and DS5320. **Transparent**

Cat. No.DS5300	-0504	-0507	-9609	-9910	-9212
O.D. (top) x H, mm	133 x 101	133 x 190	170 x 240	222 x 254	302 x 302
O.D. (top) x H, in.	5-1/4 x 4	5-1/4 x 7-1/2	6-3/4 x 9-3/8	9 x 10	12 x 12
Brim Cap. (nom.), L	1.2	2.2	4.7	8.3	18.8
Brim Cap. (nom.), pints	2-1/2	4-3/4	10	17-1/2	39-3/4
Jar Ht., W/Cover, mm	105	195	239	258	306
Jar Ht., W/Cover, in.	4-1/8	7-5/8	9-1/8	10-1/8	12-1/8
No. per Case	1	1	1	1	1

DS2113 Straight-Side Jar, Teflon* PFA; Teflon* PFA closure

Uniquely suited to handle concentrated acids, highly corrosive liquids, oxidizing agents, solvents and sensitive reagents. For storage of high-purity samples and standards. Ideal for digestion procedures, even where hot acid is used. PFA has excellent chemical resistance and high purity. PFA has a useful temperature range of -270°C to +250°C, widest range among fluoropolymers. Jar is autoclavable and performs well in cryogenic applications. Wide mouth gives easy access to contents. NOTE: Before autoclaving, just set cap or closure on top of the container without engaging the threads. **Autoclavable/PFA**

Cat. No.DS2113	-1000
Cap., ml	1000
Cap., oz.	32
Inside Dia., mm	110
Inside Dia., in.	4-5/16
Closure Size, mm	120
No. per Pkg	1
No. per Case	1

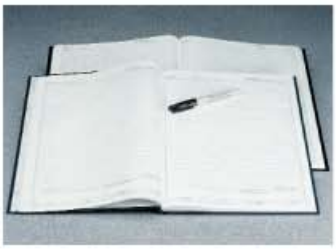
*Teflon is a registered trademark of DuPont.

Notebooks, Paper, Labels

What is PolyPaper®

PolyPaper® is our trademark for a special spunbonded polyethylene "paper" designed for exceptional strength and resistance to moisture and chemicals. Records written or printed on PolyPaper are virtually indestructible. PolyPaper outperforms conventional papers, even those with special coatings. It is unaffected by fresh or salt water. The non-absorbent, lint-free material resists mildew, tearing, fraying, curling, aging and discoloration. Chemical spills rinse off easily. Coated PolyPaper accepts any writing device. You can even write on it with No. 2 pencil under water. Uncoated PolyPaper accepts ballpoint pen and felt-tip pen or marker.

NOTE: Cat. Nos. 6301, 6302 and 6501 have paper pages, not PolyPaper ones.



6300 Laboratory Notebooks, uncoated PolyPaper pages; polyethylene cover

Valuable notes and data are permanently secured in these hardcover, case-bound books – important for documenting research. Books have a thick polyethylene cover, uncoated PolyPaper pages, and are completely waterproof and extremely chemical resistant. 100 pages (50 sheets) are numbered and printed with a fine green 1/4-in. grid or horizontal lines. Pages include spaces for dates and signatures of workers and witnesses, necessary documentation for securing protection. Other pages include instructions for keeping research records, table of contents, and a page for issuing the notebook.

Cat. No.6300	-1000	-2000
Cover Color	Black	Blue
Page Format	1/4-in. grid	3 lines per inch
Overall Dim., mm	241.3 x 292.1 x 15.9	241.3 x 292.1 x 15.9
Overall Dim., in.	9-1/2 x 11-1/2 x 5/8	9-1/2 x 11-1/2 x 5/8
Page Dimensions, mm	235 x 285.8	235 x 285.8
Page Dimensions, in.	9-1/4 x 11-1/4	9-1/4 x 11-1/4
No. per Pkg	1	1
No. per Case	6	6

6301 Laboratory Notebooks, paper pages; polyethylene cover

These notebooks feature permanently sewn-in paper pages with either grid or horizontal ruled lines. Contains 96 pages with spaces for dates and signatures of workers and witnesses, necessary documentation for securing protection. Other pages include instructions for keeping research records, table of contents, and a page for issuing the notebook. Polyethylene cover is waterproof. Overall dimensions are: 8-3/4 x 11-1/4 x 1/2 in. (Cat. Nos. 6301-1000, 6301-2000) and 215 x 305 x 12 mm. (Cat. Nos. 6301-3000, 6301-4000).

Cat. No.6301	-1000	-2000	-3000	-4000
Page Format	8-1/2 x 11 in.; 1/4 in. grid	8-1/2 x 11 in. 3 lines/in.	A4; 5 mm grid	A4; 5 mm spacing
Cover Color	Forest Green	Burgundy	Forest Green	Burgundy
Page Dimensions	8-1/2 x 11 in.;	8-1/2 x 11 in.	210 x 297 mm	210 x 297 mm
No. per Pkg	1	1	1	1
No. per Case	6	6	6	6

6501 Laboratory Notebook, paper pages; polyethylene cover

Specially designed for process record keeping and ideal for research laboratories in securing protection. Featuring 184 high quality acid-free, paper pages with 1/4-in. grid lines. The 8-1/2-in. x 11-in. pages are permanently bound and sewn. Page format includes place for preparer and witness signatures to aid in securing patent protection. Burgundy cover is water resistant.

Cat. No.6501	-1000
Overall Dim., cm	22.5 x 28.6 x 1.6
Overall Dim., in.	8-7/8 x 11-1/4 x 5/8
Page Dimensions, cm	216 x 279
Page Dimensions, in.	8.5 x 11
No. per Case	6

6302 Duplex Laboratory Notebook, paper pages; brown polyethylene cover

Pages are printed on one side only and each page has an identically numbered duplicate page behind it; the book has 50 numbered sets (100 note sheets). Duplicate pages are perforated for easy removal. Carbon paper is not supplied with notebooks.

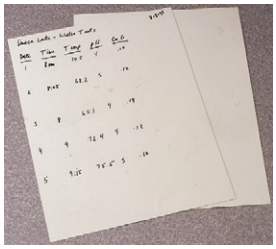
Cat. No.6302	-1000
Overall Dim., mm	225 x 286 x 16
Overall Dim., in.	8-7/8 x 11-1/4 x 5/8
Page Dimensions, mm	216 x 279
Page Dimensions, in.	8-1/2 x 11
No. per Pkg	1
No. per Case	6

6303 Spiral Field Notebook, coated PolyPaper pages; blue polyethylene cover

The ideal large notebook for fieldwork anywhere moisture or chemicals may be a problem. Flexible yet durable cover, with sheets permanently bound with spiral binding. Pages are printed on both sides with a fine, green 1/4-in. grid and numbered 1 through 96, plus title and table of contents pages. Each page has spaces for dates and signatures of workers and witnesses to research records.

Cat. No.6303	-1000
Overall Dim., mm	235 x 286 x 11
Overall Dim., in.	9-1/4 x 11-1/4 x 7/16
Page Dimensions, mm	229 x 286
Page Dimensions, in.	9 x 11-1/4
No. per Pkg	1
No. per Case	6

6304 PolyPaper Plastic Paper Sheets



These sheets roll or fold without cracking and stay flexible at cold temperatures. They won't rip, stretch or shrink. They can be punched for use in binders or cut into labels to be enclosed with wet or dry chemical or biological samples stored in formalin. You can write on PolyPaper plastic paper with almost any pen or marker, type or print. Cat. No. 6304-9811 insert is uncoated and can be used in photocopiers and laser printers. Cat. No. 6304-0811 is coated, it accepts pencil.

Cat. No.6304	-0811	-9811
Page Dimensions, mm	216 x 279	216 x 279
Page Dimensions, in.	8-1/2 x 11	8-1/2 x 11
No. per Pkg	100	-
No. per Case	500	300

6309 PolyPaper Labels, (coated); pressure-sensitive adhesive

These die-cut labels have rounded corners and a special adhesive backing which adheres well to plastics, glass or metals. Cat. No. 6309-0010 is excellent for labeling microscope slides. Not intended for use in photocopiers or computer-based laser printers.*

*Refer to package label for printing instructions.

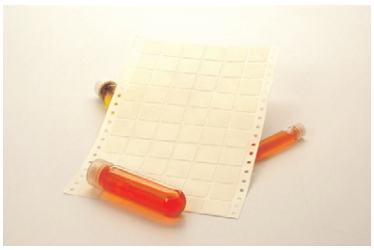
Cat. No.6309	-0010	-0015	-0020	-0030	-0040
Label Dim., mm	22 x 22	19 x 38	25 x 51	38 x 76	51 x 102
Label Dim., in.	7/8 x 7/8	3/4 x 1-1/2	1 x 2	1-1/2 x 3	2 x 4
No. per Sheet	60	48	24	12	6
No. per Pkg	600	480	240	120	60
No. per Case	6000	4800	2400	1200	600

A

6314 Laser PolyPaper Labels, pressure-sensitive adhesive

Uncoated labels will not curl, wrinkle or melt when used in photocopiers or laser printers. Die-cut labels have rounded corners and a special adhesive backing which adheres well to plastics, glass or metal. Ideal for use as address labels or identification labels for lab bottles, containers, biological samples, equipment, or microscope slides. Rated for use to -29°C. **Autoclavable**

Cat. No.6314	-0010	-0015	-0020	-0030	-0040
Label Dim., mm	22 x 22	19 x 38	25 x 67	13 x 44	51 x 102
Label Dim., in.	7/8 x 7/8	3/4 x 1-1/2	1 x 2-5/8	1/2 x 1-3/4	2 x 4
No. per Pkg	880	600	270	680	100
No. per Case	4400	3000	1350	3400	500



6315 PolyPaper Computer Labels, (coated); pressure-sensitive adhesive

Continuous-feed labels on heavy-weight backing specifically designed for pin-fed printers. Not intended for use in photocopiers or laser printers. Accommodates standard word processor and database printing. Ideal for use as address labels or identification labels for lab bottles, containers, biological samples, equipment, microscope slides, etc. Special adhesive backing adheres well to plastics, glass and metals.

Cat. No.6315	-0010
Label Dim., mm	22 x 22
Label Dim., in.	7/8 x 7/8
Format	6 across
No. per Pkg	600
No. per Case	6000

6316 PolyPaper Right-To-Know Custom Labeling System

Create labels that identify the chemical and its properties. Refer to the appropriate Material Safety Data Sheet (MSDS) or other reference material to verify the correct codes. Overlay is provided to protect the label from chemicals. Consists of pressure-sensitive stickers and blank labels. Complete instructions included with each package.

Cat. No.6316	-1000
No. per Pkg	25
No. per Case	150

6310, 6311 Lab Pen; Lab Markers

Felt-tip pens have a specially formulated, quick-drying black ink to provide the ultimate chemical and water resistance with PolyPaper. Excellent indelible pens for use on plastic or glass. Caps have convenient pocket clip. Cat. No. 6310 has thin point, Cat. No. 6311 has a thick point.

Cat. No.6310	-0010
No. per Pkg	4
No. per Case	12

Cat. No.6311	-0010
No. per Pkg	4
No. per Case	12

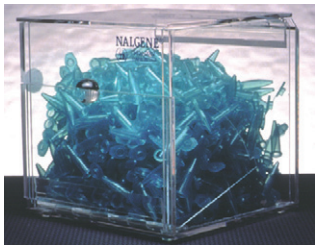
Organizers

5810 Pipet Box Holders, acrylic

Pipet Box Holder holds one box of 5-3/4-in. pipets at an angled position for easy access. Storage area for rubber bulbs. Pipet Holder holds bags, boxes, pipet canisters or 1- to 100-ml individually-wrapped serological pipets. Divider can be removed to form one large storage area. Can be mounted under the shelf with two brackets (Cat. No. 5800-0002). Angled Pipet Holder with four compartments prevents pipets from sliding out. Accommodates bags, boxes, pipet canisters or 1- to 100-ml individually-wrapped serological pipets.

Cat. No.5810	-0002	-0004
Holder For:	Box Pipets	Pipets, Angled
Dim., Outside, mm	152 x 152 x 381	89 x 416 x 292
Dim., Outside, in.	6 x 6 x 15	3-1/2 x 16-3/8 x 11-1/2
No. per Case	1	1

5830 Dispensing Bins, All Purpose, acrylic



Top Dispensing Bin (shown) with two compartments has a divider that can be removed to form one storage area. Hinged dust cover keeps items clean. Front Dispensing Bin with hinged front access allows easy item removal. Multiple Dispensing Bin with four compartments has hinged dust covers to keep items clean.

Cat. No.5830	-0001	-0002	-0003
Bin Type	Top	Front	Multiple
O.D., mm	152 x 152 x 152	152 x 152 x 152	305 x 152 x 381
O.D., in.	6 x 6 x 6	6 x 6 x 6	12 x 6 x 15
No. per Case	1	1	1

5832 Stackable Drawer, All-purpose, acrylic

Units nest for high-density storage and can be mounted under a shelf or cabinet with provided screws.

Cat. No.5832	-0001
Dim., Outside, mm	114 x 229 x 229
Dim., Outside, in.	4-1/2 x 9 x 9
No. per Case	1

6803 Pipet Rack Stand, acrylic

Keep your pipettors within reach and behind your beta shield with this convenient rack. Holds four standard size pipettors. Mount rack on any benchtop beta shield or on its own stand. Keeps clutter away from work area. Stand is 3/8-in. (9-mm) thick acrylic. **Transparent**

Cat. No.6803	-0001
H x W x D, mm	152 x 260 x 102
H x W x D, in.	6 x 10-1/4 x 4
No. per Case	1

5833 Parafilm Dispenser, acrylic

Holds one standard box or roll of 4-in. (102mm) Parafilm* or two 2-in. (51-mm) rolls securely for easy dispensing. Channeled front allows for cutting Parafilm. Storage for blade included but blade is not included.

*Registered trademark of American National Can.

Cat. No.5833	-0001
O.D., mm	152 x 121 x 152
O.D., in.	6 x 4-3/4 x 6
No. per Case	1

5835 Glove Box Holder, acrylic

Keep latex gloves readily accessible and organized with this convenient holder. Mounts on wall with provided screw and wall anchors.

Cat. No.5835	-0001
O.D., mm	140 x 254 x 102
O.D., in.	5-1/2 x 10 x 4
No. per Case	1

5700 Utility Boxes, styrene-acrylonitrile; white low-density polyethylene lid with white SAN insert

Available in seven different sizes and shapes for multipurpose lab storage. Ideal for dry materials like powders, filters, chromatography sheets, stoppers and fittings. Appropriate for freezer storage and short-term storage of non-volatile liquids. Cat. No. 5700-0500 is ideal for electrophoresis gels. Lids snap securely into place. Stackable; rounded corners for easy cleaning. **Transparent**

Cat. No.	Nom. Cap., ml	Nom. Cap., oz.	L x W x H, mm	No. per Pkg	No. per Case
5700-0125	125	4	75 x 64 x 60	4	24
5700-0300	300	9	75 x 62 x 117	4	24
5700-0325	325	10	129 x 75 x 59	4	24
5700-0500	500	16	191 x 156 x 37	2	12
5700-0750	750	24	129 x 75 x 105	2	16
5700-1000	1000	32	127 x 73 x 175	2	12
5700-2000	2000	64	191 x 154 x 94	1	8

Pans & Trays

A

6900 Sterilizing Pans, polypropylene

Useful for drying and sterilizing instruments, labware; collecting and washing soiled lab equipment. Rolled edges for extra stiffness; handles for easy carrying. **Autoclavable**

Cat. No.6900	-0010	-0020
Cap., L	9.5	14.2
Cap., qts.	10	15
Top O.D., L x W x H, mm	361 x 311 x 143	543 x 435 x 130
Top O.D., L x W x H, in.	14-1/4 x 12-1/4 x 5-5/8	21-3/8 x 17-1/8 x 5-1/8
No. per Pkg	1	1
No. per Case	6	6

6910 Instrument/Pipet Sterilizing Pan, filled polypropylene

Horizontal design allows pipets to be fully immersed in disinfectant. Plastic construction cuts down on breakage and chipping of glass pipet tips. Cover fits into groove of pan to minimize spillage of hazardous materials. Resistant to aggressive disinfectants. Can also be used to sterilize small labware instruments and utensils. Stackable, lightweight, quiet and less expensive than stainless steel. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens.

Autoclavable/Biohazard

Cat. No.6910	-0618
L x W x H, mm	456 x 152 x 67
L x W x H, in.	18 x 6 x 2-5/8
No. per Pkg	1
No. per Case	6

7120 Pans, high-density polyethylene

Use for soaking labware or as ice bath. With handles for easy carrying. Tapered for nesting.

Cat. No.7120	-0010	-0020
Top O.D., mm	358 x 308 x 143	541 x 435 x 130
Top O.D., in.	14-1/8 x 12-1/8 x 5-5/8	21-3/8 x 17-1/8 x 5-1/8
Bottom I.D., mm	254 x 221 x 135	422 x 336 x 127
Bottom I.D., in.	10 x 8-3/4 x 5-3/8	16-5/8 x 13-1/4 x 5
No. per Pkg	1	1
No. per Case	6	6

6901 Round Basin, polypropylene

Useful for drying and sterilizing instruments or labware. Also convenient as an ice bath. Rolled edges for extra stiffness. **Autoclavable**

Cat. No.6901	-0040
Cap., L	3.8
Cap., qts.	4
Top I.D. x Depth, mm	267 x 90
Top I.D. x Depth, in.	10-1/2 x 3-1/2
No. per Pkg	1
No. per Case	12

6902 Autoclavable Pans, polypropylene

For repeated autoclaving of instruments and labware. Heavy-duty construction, extra-strong rims.

Autoclavable

Cat. No.6902	-1000	-2000	-3000	-5000
Nom. Cap., L	2	2.8	3.1	5
Nom. Cap., qts.	1.8	2	3	5
Top O.D., L x W x H, mm	260 x 159 x 64	260 x 159 x 105	324 x 260 x 70	324 x 257 x 108
Top O.D., L x W x H, in.	10-1/4 x 6-1/4 x 2-1/2	10-1/4 x 6-1/4 x 4-1/8	12-3/4 x 10-1/4 x 2-3/4	12-3/4 x 10-1/8 x 4-1/4
No. per Pkg	1	1	1	1
No. per Case	6	6	6	6

A

6917 Autoclaving Baskets, polypropylene

Hold labware during autoclaving and washing. Smooth surface will not scratch plastic or glass.
Autoclavable

Cat. No.6917	-0127	-0150	-0230
L x W x H, mm	154 x 123 x 105*	178 x 168 x 156*	239 x 230 x 233*
L x W x H, in.	6-1/16 x 4-7/8 x 4-1/8	6-1/8 x 6-5/8 x 7	9-3/16 x 9-1/16 x 9-7/16
No. per Pkg	1	1	1
No. per Case	6	6	6

*Measured at top.

Petri Dishes/Racks

A

5920 Petri Dish Rack, polycarbonate frame, white polycarbonate posts

Petri Dish Rack can be decontaminated by heat sterilization. Smooth, rounded corners, finger-grip handle and rubber feet make carrying up to 54 plastic round dishes (100mm x 15mm) or 42 glass round dishes (100mm x 15mm) safe and secure. Simple assembly required. **Autoclavable**

Cat. No.5920	-0060
L x H x W, cm	34.3 x 23.5 x 20.3
L x H x W, in.	13.5 x 9.25 x 8
No. per Pkg	1
No. per Case	2

A

5921 Petri Dish Rack, polycarbonate frame, white polycarbonate posts

Petri Dish Rack can be decontaminated by heat sterilization. Smooth, rounded corners, finger-grip handle and rubber feet make carrying up to 72 plastic round dishes (60mm x 15mm) safe and secure. Simple assembly required. Use with NUNC™ 60mm PS Sterile Petri Dishes (Cat. No. 4036). **Autoclavable**

Cat. No.5921	-0060
L x H x W, cm	29.8 x 15.2 x 20.3
L x H x W, in.	11-1/4 x 6 x 8
No. per Pkg	1
No. per Case	2

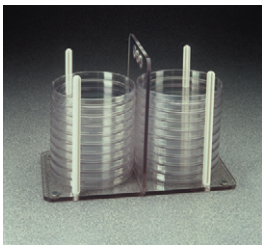
5922 Petri Dish Rack, acrylic frame, polycarbonate posts

Lightweight, easy to load and provides safe transport. Break-resistant PC posts. Comes unassembled. Holds up to twenty-four 100 mm dishes.

Cat. No.5922	-0024
L x H x W, cm	20.6 x 10.2 x 20.3
L x H x W, in.	8-1/8 x 8 x 4
No. per Pkg	1
No. per Case	4

5923 Petri Dish Rack, polycarbonate frame, white polycarbonate posts

Petri Dish Rack can be decontaminated by heat sterilization. Smooth, rounded corners, finger-grip handle and rubber feet make carrying up to 18 plastic round dishes (150mm x 20mm) or 18 glass round dishes (150mm x 15mm) safe and secure. Simple assembly required. Use with NUNC™ 150mm PS Sterile Petri Dishes (Cat. No. 4014) and NUNC 150mm PS Petri DIshes (Cat. No. 240401). **Autoclavable**



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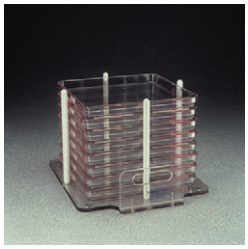
Cat. No.5923	-0020
L x H x W, cm	33 x 17.8 x 21.6
L x H x W, in.	13 x 6.75 x 8.25
No. per Pkg	1
No. per Case	1

5925 Petri/Culture Dish Rack, polycarbonate frame, white polycarbonate posts

Petri/Culture Dish Rack can be decontaminated by heat sterilization. Smooth, rounded corners, finger-grip handle and rubber feet make carrying up to 8 plastic square dishes (245mm x 245mm x 25mm) safe and secure. Simple assembly required. Use with NUNC Bio-Assay Dishes, (Cat. No. 240835). **Autoclavable**



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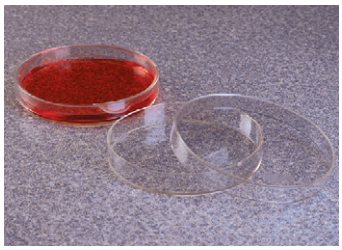
Cat. No.5925	-0008
L x H x W, cm	34.9 x 28.6 x 21.6
L x H x W, in.	13-3/4 x 11-1/4 x 8-1/2
No. per Pkg	1
No. per Case	1

5500 Petri Dish, polymethylpentene

Shatterproof and reusable. Has superior chemical resistance; resists cell adhering. Stackable for convenience. **Autoclavable/Transparent**



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Cat. No.5500	-0010
Dia. x Ht., mm	100 x 15
No. per Pkg	10
No. per Case	60

Pipet Jars

Selection Guide for choosing compatible NALGENE pipet baskets, jars and rinsers:

Max. pipet Length, mm/in.	Basket	Jar	Rinser
203/8	B	B	D
406/16	D	D	D
610/24	E	E	E
813/32	F	F	F

Pipet Jars

DS5241 Pipet Baskets, high-density polyethylene

Rugged, resilient baskets cushion pipets. Perforated screen is recessed into base 3/4 in. for complete drainage. Basket O.D. 133 mm (5-1/4 in.).

Cat. No.DS5241	-0020	-0040	-0050	-0060
Size	B	D	E	F
Height with Handle, mm	375	578	781	978
Height With Handle, in.	14-3/4	22-3/4	30-3/4	38-1/2
No. per Case	1	1	1	1

5242 Pipet Jars, cross-linked high-density polyethylene, PPCO base

Tough, stiff, seamless jars resist stress-cracking. Ideal for soaking glassware, washing pipets with corresponding NALGENE rinsers and baskets. Flanged base for added stability. Make excellent large general purpose containers and come with dust covers. The formula shown on the jar's label is effective and lasts longer than standard solutions. Do not mix this solution in the pipet jar. Keep jar on a drainboard, in a sink or in a container large enough to retain jar contents in case of leakage. The 5-gallon heavy-duty cylindrical container (Cat. No. 11100-0005) is recommended for storing the pipet jar, when using this solution.

Caution: Concentrated sulfuric acid will cause pipet jar to fail. When cleaning pipets with a sulfuric acid-dichromate compound, the acid concentration must be 60% or less.

Cat. No.5242	-0020	-0030	-0040	-0050	-0060
Size	B	C	D	E	F
Dim. (H x D), mm	229 x 165	457 x 127	514 x 165	686 x 165	914 x 175
Dim. (H x D), in.	9 x 6-1/2	18 x 5	20-1/4 x 6-1/2	27 x 6-1/2	36 x 6-7/8
No. per Pkg	1	1	1	1	1
No. per Case	12	6	6	6	2

5245 Pipet Washer-Rinsers, high-density polyethylene

One-piece leakproof washer-rinser. Wide range of cycling speeds; operates with water input from 1-1/2 to 12 liters per minute without "siphon-stall". When there's a drop in water pressure, water inlet at top eliminates the risk of back-siphoning contaminated water into the water line. Tubing for both inlet and outlet is packed with each unit, ready for immediate installation.

Cat. No.5245	-0040	-0050
Size	D	E
Max. Pipet Length, mm	406	610
Max. Pipet Length, in.	16	24
Overall Height, mm	775	965
Overall Height, in.	30-1/2	38
No. per Pkg	1	1
No. per Case	6	4

DS5240 Pipet Washer-Rinser, low-density polyethylene

Designed for use on sink drainboard. Large siphon tube permits water to be cycled rapidly through pipets. Repeats automatically. Water use may be as low as 1.5 liters per minute. May be connected directly to drainline. When there's a drop in water pressure, water inlet at top eliminates the risk of back-siphoning contaminated water into the water line. Equipped with 1 in. 90° elbow for connection to flexible tubing. When used with tubing cut to a length of 6 to 12 in. (152.4 mm to 304.8 mm).

Cat. No.DS5240	-0060
Size	F (For pipets up to 813 mm; 32 in. long)
No. per Case	1

5250, DS5250 Pipet Cleaning Sets

Each of these conveniently packaged sets has one pipet jar, basket and washer-rinser in the size indicated. For specifications, refer to sizes D, E or F, (Cat. Nos. 5245 and DS5240). One three-pack unit per set.

Cat. No.5250	-0040	-0050
Size	D	E
No. per Case	1	1
Cat. No.DS5250	**-0060**	
Size	F	
No. per Case	1	

For horizontal pipet washing, see Cat. No. 6910-0618, instrument/pipet sterilizing pan

Radiation Safety

NALGENE® Acrylic Beta Radiation Shields

This family of NALGENE products is designed to provide maximum shielding during procedures which require the handling of ß$^-$-emitting isotopes, such as ^{32}P, ^{14}C and ^{35}S. According to the Radiological Health Handbook*, the maximum beta range for polymethylmethacrylate (acrylic) shielding with a density of 1.15g/cm^3 is 6.9mm or 0.27-in. NALGENE beta radiation shields made of 3/8-in. acrylic provide all the protection you need. Acrylic cannot shield against secondary x-rays (Bremsstrahlung) or gamma radiation.

NALGENE acrylic beta radiation shields are made of durable, transparent acrylic, which has been proven in laboratory tests to stop ß$^-$ radiation. Tests were conducted using a 100 mCi point source of ^{32}P placed behind an acrylic test shield. The exposure rate was measured using an Eberline E-120. No ß$^-$ radiation penetrated a 3/8-in. shield. Additional shielding is provided by any associated plastic containers, such as NALGENE bottles made of polyethylene.

*Radiological Health Handbook, U.S. Department of Health, Education and Welfare, 1970

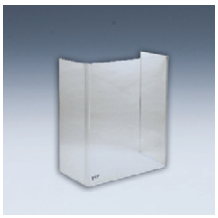
WARNING! Radioactive waste should never be stored on the benchtop for long periods of time and should be disposed of properly. Proper handling and storage of isotopes will minimize exposure to radiation. For standards related to exposure, refer to United States Nuclear Regulatory Commission Rules and Regulations, Title 10, Chapter 1, Part 20.

6700 Benchtop Beta Shield, acrylic

Specifically designed for use on the laboratory benchtop during procedures which require the handling of ß–emitting isotopes. Made of 3/8-inch (9-mm) thick acrylic. Transparent, free-standing. Angled top allows contents of tubes located behind the shield to be viewed from the top while the shield protects the lab worker. The 12-inch (305-mm) deep base provides a large flat work surface and minimizes the risk of "hot spots" on the lab bench. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. **Radiation**

Cat. No.6700	-1812	-2418
H x W x D, mm	457 x 305 x 305	610 x 457 x 305
H x W x D, in.	18 x 12 x 12	24 x 18 x 12
No. per Case	1	1

WARNING! Radioactive waste should never be stored on the benchtop for long periods of time and should be disposed of properly. Proper handling and storage of isotopes will minimize exposure to radiation. For standards related to exposure, refer to United States Nuclear Regulatory Commission Rules and Regulations, Title 10, Chapter 1, Part 20.



6701 U-Shaped Benchtop Beta Shields, acrylic

Use as stand-alone beta shields, waste container shields or as backdrops for benchtop beta shield (Cat. No. 6700). Made of 3/8-inch (9-mm) thick acrylic. Transparent and free-standing. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens.

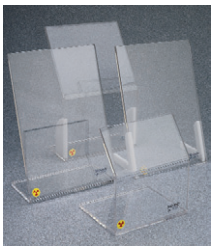
Radiation/Transparent

Cat. No.6701	-1813	-2419
H x W x D, mm	457 x 337 x 187	610 x 489 x 254
H x W x D, in.	18 x 13-1/4 x 7-3/8	24 x 19-1/4 x 10
No. per Case	1	1

6801 Upright Benchtop Beta Shield, acrylic

1/2-in. (12-mm) thick acrylic. Ideal for use with instruments and chromatography columns. Large base provides increased stability. **Radiation/Transparent**

Cat. No.6801	-0001
H x W x D, mm	457 x 305 x 127
H x W x D, in.	18 x 12 x 5
No. per Case	1



6802 Angled Benchtop Beta Shields, acrylic

Angled to allow ease of viewing. Shields with base are large enough to hold mini-containment chambers, block racks or microtube racks. All are 1/2-in. (13-mm) thick acrylic.

- 6802-0001 Angled Benchtop Beta Shield. Angled face section permits easy viewing.
- 6802-0002 Angled Benchtop Beta Shield with Sides. Increased protection of those adjacent to work area. Mid-section permits ample room for chambers and racks.
- 6802-0003 Angled Benchtop Beta Shield with Legs. Provides additional protection for other beta shielding products. Legs provide stability without base.
- 6802-0004 Personal Benchtop Shield. Provides maximum protection and conserves benchtop space.

Radiation/Transparent

Cat. No.6802	-0001	-0002	-0003	-0004
Configuration	Angled Benchtop Shield	Angled with sides	Angled with legs	Personal
H x W x D, mm	457 x 305 x 162	457 x 305 x 152	457 x 305 x 168	305 x 254 x 203
H x W x D, in.	18 x 12 x 6-3/8	18 x 12 x 6	18 x 12 x 6-5/8	12 x 10 x 8
No. per Case	1	1	1	1

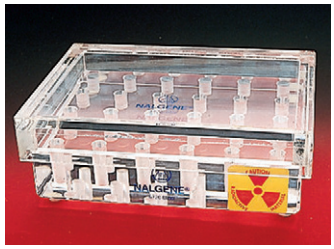
6804 Beta Finger Block, acrylic

Holds four 1.5-ml microcentrifuge tubes. Fits conveniently in one hand for transporting samples. Equipped with round fitted lid. 3/8-in. (9-mm) thick acrylic. No-skid feet prevent sliding on benchtop.
Radiation/Transparent

Cat. No.6804	-0001
Ht., mm	64
Ht., in.	2-1/2
O.D., Diam., mm	60
O.D., Diam., in.	2-3/8
No. per Case	1

6720 Beta Test Tube Racks with Cover, acrylic

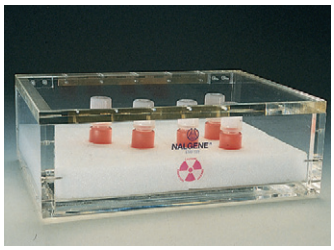
Provides maximum protection when handling high-specific-activity solutions. Use with Eppendorf-type microcentrifuge tubes and other small tubes. Bottom and sides of tubes are shielded to recommended fill level by 3/8-inch (9-mm) acrylic. Wells are generously spaced to eliminate interference of snap caps with adjacent tubes, provide easy handling and minimize risk of contamination. Convenient 4 x 6 array is useful for sequencing reactions. Supplied with separate acrylic cover to shield tube caps.
Radiation/Transparent



Cat. No.6720	-9150
Tube Size, ml	1.5
Rack: H x W x D, mm	44 x 171 x 118
Rack: H x W x D, in.	1-3/4 x 6-3/4 x 4-5/8
Cover: H x W x D, mm	29 x 181 x 124
Cover: H x W x D, in.	1-1/8 x 7-1/8 x 4-7/8
No. per Pkg	1
No. per Case	4

6740 Beta Storage Box, acrylic

Provides shielded storage for stock isotope solutions and radiolabelled samples. Rectangular design saves valuable space in refrigerator or freezer. Withstands prolonged use at temperatures to -70°C. Made of 3/8-inch (9-mm) thick acrylic. Hinged, transparent top allows easy identification of samples without opening the lid. Minimizes exposure of lab worker to unshielded isotopes. Includes two disposable foam inserts for secure positioning of lead pigs (small or large) or isotope bottles. Foam inserts are also available separately, Cat. No. 71-6740-0001. Box will accommodate one or more test tube racks. **Radiation/Transparent**



Cat. No.6740	-1108
H x W x D, mm	102 x 279 x 203
H x W x D, in.	4 x 11 x 8
No. per Pkg	1
No. per Case	2

For replacement parts, see Reference/Replacement Parts pages.

6710 Benchtop Beta Waste Containers (with bottle), acrylic; polyethylene bottle

Made of 3/8-inch (9-mm) thick acrylic. Available in two sizes to hold 1- or 2-liter waste bottles. A NALGENE polyethylene bottle is included for liquid waste: Cat. No. 2104-0032 (1000 ml); Cat. No. 2120-0005 (2000 ml), Cat. Nos. 2125-1000, 2125-2000, and 2115-1000, 2115-2000 may also be used as replacement bottles. Cat. No. 6710-1000 (1-L size without bottle) accommodates standard 8-in. x 12-in. bag for use with solid waste.

The transparent shield encases the waste bottle without obstructing access to or manipulation of bottle closure. Machined lip on the cap prevents slipping and provides extra impact protection.

Radiation/Transparent

Cat. No.6710	-1000	-2000
Cap., L	1	2
Cap., oz.	32	64
Ht. x Dia., mm	235 x 114	286 x 140
Ht. x Dia., in.	9-1/4 x 4-1/2	11-1/4 x 5-1/2
No. per Case	1	1

WARNING! Radioactive waste should never be stored on the benchtop for long periods of time and should be disposed of properly. Proper handling and storage of isotopes will minimize exposure to radiation. For standards related to exposure, refer to United States Nuclear Regulatory Commission Rules and Regulations, Title 10, Chapter 1, Part 20.

6809 Disposal and Storage Containers with Lid, acrylic

Provide maximum protection for temporary storage or disposal of radioactive materials, such as microcentrifuge tubes. Fitted lid is designed for maximum containment of emissions. Lid handle minimizes exposure of fingers to contents. Containers save space and provide protection on or under the lab bench. No-skid rubber feet prevent containers from sliding on lab bench or floor. 1/2-in. (13-mm) thick acrylic. **Radiation/Transparent**

Cat. No.6809	-0001	-0002
O.D., H x W x D, mm	210 x 178 x 178	359 x 229 x 229
O.D., H x W x D, in.	8-1/4 x 7 x 7	14-1/8 x 9 x 9
I.D., H x W x D, mm	152 x 152 x 152	305 x 203 x 203
I.D., H x W x D, in.	6 x 6 x 6	12 x 8 x 8
No. per Case	1	1

6812 Disposal and Storage Containers with Hinged Lid, acrylic

For temporary storage and disposal of microcentrifuge tubes and pipet tips exposed to beta emitting isotopes. Equipped with extra-long, acrylic hinge for extended durability. Built-in Quick-Tip mini-lid minimizes exposure to radioisotopes. 1/2-in. (13-mm) thick acrylic. **Radiation/Transparent**

Cat. No.6812	-0001	-0002
O.D., H x W x D, mm	124 x 254 x 216	241 x 254 x 216
O.D., H x W x D, in.	4-7/8 x 10 x 8-1/2	9-1/2 x 10 x 8 -1/2
I.D., H x W x D, mm	76 x 229 x 152	178 x 229 x 152
I.D., H x W x D, in.	3 x 9 x 6	7 x 9 x 6
No. per Case	1	1

6745 Large Beta Waste Shields, acrylic

Completely enclose a large container holding solid or liquid radioactive waste. Accommodates 20-liter NALGENE carboys and standard office-size trash cans. Smaller shield accommodates 10-liter containers. Made of durable, transparent, 3/8-inch (9-mm) thick acrylic. Large hinged door on cover allows easy access to the waste receptacle. Leakproof tray contains spills. Hinged corners allow removal of receptacle. **Radiation/Transparent**

Cat. No.6745	-0010	-9024
O.D., H x W x D, mm	432 x 330 x 330	737 x 457 x 457
O.D., H x W x D, in.	17 x 13 x 13	29-3/8 x 18 x 18
I.D., H x W x D, mm	406 x 286 x 286	736 x 406 x 406
I.D., H x W x D, in.	16 x 11-1/4 x 11-1/4	29 x 16 x16
No. per Case	1	1

6850 Beta Bench-Top Lock Box*, acrylic

Small, bench-top box that is useful for secured storage in a refrigerator or freezer. It holds lead pigs or radioisotope vials up to 3-1/2 in. (89-mm) tall. Hinged lid provides easy access. **Radiation/Transparent**

Cat. No.6850	-0001
Dimensions, (Outside), H x W x D, mm	102 x 330 x 286*
Dimensions, (Outside), H x W x D, in.	4 x 13 x 11-1/4*
Dimensions, (Inside), H x W x D, mm	76 x 229 x 152
Dimensions, (Inside), H x W x D, in.	3 x 9 x 6
No. per Case	1

*Includes collar for cable and lock connection capability.

6851 Beta Stackable Lock Box* with Drawer, acrylic

A front pull-out drawer provides easy access. Boxes can be stacked to conserve bench or refrigerator space. Standard-size lead pigs and radioactive vials fit in the drawer. **Radiation/Transparent**

Cat. No.6851	-0001
Dimensions, (Outside), H x W x D, mm	165 x 267 x 521*
Dimensions, (Outside), H x W x D, in.	6-1/2 x 10-1/2 x 20-1/2
Dimensions, (Inside), H x W x D, mm	127 x 222 x 375
Dimensions, (Inside), H x W x D, in.	5 x 8-3/4 x 14-3/4
No. per Case	1

*Includes collar for cable and lock connection capability.

WARNING! Radioactive waste should never be stored on the benchtop for long periods of time and should be disposed of properly. Proper handling and storage of isotopes will minimize exposure to radiation. For standards related to exposure, refer to United States Nuclear Regulatory Commission Rules and Regulations, Title 10, Chapter 1, Part 20.

6852 Mid-Size Beta Lock Box*, acrylic

Under-the-bench unit. Holds NALGENE 10-L carboys, Cat. Nos. 2210-0020 or 2234-0020.
Radiation/Transparent

Cat. No.6852	-0001
Dimensions, (Outside), H x W x D, mm	546 x 330 x 445
Dimensions, (Outside), H x W x D, in.	21-1/2 x 13 x 17-1/2
Dimensions, (Inside), H x W x D, mm	445 x 279 x 279
Dimensions, (Inside), H x W x D, in.	17-1/2 x 11 x 11
No. per Case	1

*Includes collar for cable and lock connection capability

6853 Large Beta Lock Box* with Wheels, acrylic with metal casters/wheels

Large floor model with wheels is ideal for radioactive waste disposal. Heavy-duty casters provide easy movement. **Radiation/Transparent**

Cat. No.6853	-0001
Dimensions, (Outside), H x W x D, mm	1073 x 489 x 305
Dimensions, (Outside), H x W x D, in.	42-1/4 x 19-1/4 x 12
Dimensions, (Inside), H x W x D, mm	864 x 279 x 279
Dimensions, (Inside), H x W x D, in.	34 x 11 x 11
No. per Case	1

*Includes collar for cable and lock connection capability

6800 Beta Apron, neoprene

Unique 1/4-in. (6-mm) thick neoprene rubber apron blocks beta radiation and protects against hazardous chemicals. Shields >97% of ^{32}P emissions. Designed to augment other radiation shielding devices. Easily adjustable fabric-covered neck strap. No metal parts. One size fits all.

Cat. No.6800	-0001
Size L x W, in.	32 x 20
No. per Case	1

Reagent Reservoirs

1200 Disposable Robotic Reservoirs, Polypropylene

A standard microplate format with 300mL volume increases your walk-away time and kicks your assay efficiency up a notch! The revolutionary convoluted design* minimizes dead volume and has baffles to reduce splashing. The flat bottom version is designed to meet a variety of assay needs in both manual and automated environments. Both are precision-molded of polypropylene - the material of choice for many cell-based assays due to its low protein binding.

- **1200-1300:** Reservoir, 300 ml, Flat Bottom, Non-sterile
- **1200-1301:** Reservoir, 300 ml, Flat Bottom, Sterile
- **1200-2300:** Reservoir, 300 ml, Convoluted Bottom, Non-sterile
- **1200-2301:** Reservoir, 300 ml, Convoluted Bottom, Sterile

Cat. No.1200	-1300	-1301	-2300	-2301
L x W x H, mm	86 x 128 x 43	86 x 128 x 43	86 x 128 x 43	86 x 128 x 43
L x W x H, in.	3.4 x 5 x 1.7	3.4 x 5 x 1.7	3.4 x 5 x 1.7	3.4 x 5 x 1.7
No. per Pkg	4	4	4	4
No. per Case	40	40	40	40

Sanitary Fittings

CAUTION! Plastic tanks are generally subject to more severe conditions than plastic labware; exposure is constant, stresses are greater and different classes and concentrations of chemicals are involved. Please pay special attention to chemical compatibility.

2665 End Caps, polypropylene

Use these end caps to securely close off 3/4" or 3" sanitary port. Groove on underside of end cap accepts standard sanitary gasket. **Autoclavable/USPVI/21CFR177.1520**

Cat. No.2665	-0075	-0300
Size, in.	3/4 Mini	3 Tri
Size, mm	19	76
No. per Case	1	1

USP VI A

2670 True Union Clamps, PVDF

All plastic threaded clamp system. Recommended for use with 2630 and 2640 series carboys.
Autoclavable

Cat. No.2670	-0075	-0150	-0300
Size, in.	3/4 Mini	1-1/2 Tri	3 Tri
Size, mm	19	38	76
No. per Case	1	1	1

A

A

2688, 2689 End Caps, polycarbonate or polypropylene

Provide two 3/4-in. sanitary ports, mount to 3-in. sanitary flange. Ported end caps allow easy fill/dispense operations. Use PC cap with Cat. Nos. 2630- and 2261-series carboys; use PP cap with Cat. Nos. 2630- and 2261-series carboys. **Autoclavable**

Cat. No.	Material	No. per Case
2688-2075	PC	4
2689-2075	PP	4

A

2685 Heavy Duty Clamp, stainless steel

Strong spring-loaded clamps assure tight, leakproof fluid connections. Recommended for use with 2261 series carboy. **Autoclavable**

Cat. No.2685	-0300
Size, in.	3
Size, mm	76
No. per Case	1

A USP VI

2672 Gaskets, platinum cured silicone

Recommended for use with 2261, 2630 and 2640 series carboys. **Autoclavable/USPVI**

Cat. No.2672	-0075	-0150	-0300
For Ferrule Size, in.	3/4	1.5	3
For Ferrule Size, mm	19	38	76
No. per Pkg	1	1	1
No. per Case	6	6	6

A USP VI

7210 3/4-in. Mini x Hose-barb, polypropylene

Fitting allows connections between 3/4" sanitary fitting to flexible tubing with inner diameter of 3/8" or 1/2". **Autoclavable/USPVI**

Cat. No.7210	-0375	-0500
Hose Barb Size, in.	3/8	1/2
Hose Barb Size, mm	10	13
No. per Case	2	2

A USP VI

7211 1-in. Sanitary Tri-Clamp* x Hose barb, polypropylene

Fitting supports connections between 1" sanitary fitting to flexible tubing with inner diameter of 1/2" **Autoclavable/USPVI**

Cat. No.7211	-0500
Hose Barb Size, in.	1/2
Hose Barb Size, mm	13
No. per Case	2

*Registered trademark of Ladish Co.

Shields

6356 Safety Splash Shield, polycarbonate; acetal flexible arm; magnetic base

The NALGENE safety splash shield will help you comply with U.S. Occupational Safety and Health Administration (OSHA) bloodborne pathogen regulations (29 CFR Part 1910.1030). It attaches easily to benchtops, shelving, machinery or other magnetic surfaces for convenient protection from splashes, aerosols and flying debris. Easy to maneuver. 14- in. adjustable arm. The durable, scratch-resistant 1/8-inch (3-mm) thick polycarbonate shield protects the user while providing a clear field of vision. The magnetic base lets you position the shield horizontally (flat), vertically or on an overhead surface. Shield provides UV protection from 200-360 nanometers. DO NOT AUTOCLAVE. **Biohazard/Transparent**

Cat. No.6356	-0001
Dim. W x H, in.	8-1/2 x 12
Dim. W x H, cm	216 x 280
No. per Pkg	1
No. per Case	4

WARNING! Do not use with radioisotopes. Use NALGENE beta-radiation shields when working with beta-radioisotopes.

DS6350 Safety Shields, polycarbonate; steel base

Made of 3/16-inch (5-mm) thick polycarbonate. Proven protection from UV light in the frequency range from 200-360 nanometers. Heavy 3/4-in. thick coated steel base projects from center section of shield for extra stability, also serves as a lower handgrip. Perpendicular design allows maximum protection along full height of shield. Formed in parabolic curve for good containment of fragments and protection of personnel to the sides. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. **Biohazard/Transparent**

Cat. No.DS6350	-1524	-3024	-3636
Ht. x Width (at rear), mm	381 x 406	762 x 406	914 x 610
Ht. x Width (at rear), in.	15 x 16	30 x 16	36 x 24
No. per Case	1	1	1

WARNING! Do not use with radioisotopes. Use NALGENE beta-radiation shields when working with beta-radioisotopes.

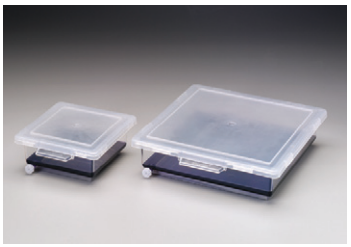
6355 Face Shield, polycarbonate; polyethylene headdress

This adjustable face shield has an optically-clear window of 1/16-in. (1.5-mm) polycarbonate which offers impact protection. Proven protection from UV light in the frequency range from 200-360 nanometers. Useful in germicidal procedures, reading of chromatographic/electrophoretic strips or gels. UV radiation may cause slight yellow-brown tint. Comfortable, adjustable headdress. The wrap-around design provides protection to the front and sides. The 29.5 cm L x 20 cm W size offers protection for the neck and top of the head. Can be worn comfortably over safety goggles. Meets OSHA Standard 29 CFR Part 1910.1030 for use as protection against bloodborne pathogens. Meets ANSI Standard Z87.1. **Biohazard/Transparent**

Cat. No.6355	-0001
No. per Pkg	1
No. per Case	4

WARNING! Do not use with radioisotopes. Use NALGENE beta-radiation shields when working with beta-radioisotopes.

Staining Boxes



5705 Staining Boxes, polymethylpentene box; polypropylene copolymer cover; low-density polyethylene plug

Stain, fix, destain and handle electrophoresis gels and membranes with less chance of damage than conventional methods. Hold 500 to 750 ml of liquid when a gel is in place. Both box and cover will resist temperatures from -70°C to +70°C and have good chemical resistance to acids, bases and select organic solvents. Allow easy liquid drainage with minimal gel handling. Plug will not interfere with the cover or the contents of boxes.

Cat. No.5705	-1010	-2020
Interior L x W x H, cm	12.5 x 12.5 x 5	22.5 x 22.5 x 5
No. per Pkg	1	1
No. per Case	2	2

Stir Bars/Rods

DS6600 Star Head® Magnetic Stir Bars, Alnico V magnet encapsulated in Teflon* TFE

Stir bars with symmetrical stirring fins on top and bottom for superior mixing. Develop a strong mixing vortex even at low stirring speeds. Provide stirring at the bottom, sides and top of the container. Work equally well in flat- or round-bottom labware. Excellent resistance to chemicals and temperatures up to 260°C. **Autoclavable/Tetrafluoroethylene (Teflon)**

*Or equivalent. Teflon is a registered trademark of DuPont.

Cat. No.	Dia. x Ht., mm	Dia. x Ht., in.	No. per Case
DS6600-0010	10 x 8	3/8 x 5/16	1
DS6600-0014	14 x 12	9/16 x 1/2	1
DS6600-0017	17 x 13	11/16 x 9/16	1
DS6600-0022	22 x 15	7/8 x 5/8	1
DS6600-0030	30 x 12	1-3/16 x 1/2	1
DS6600-0035	35 x 12	1-3/8 x 1/2	1
DS6600-0040	40 x 14	1-9/16 x 9/16	1
DS6600-0058	58 x 15	2-1/4 x 9/16	1

DS6630 Floating Stir Bars, Alnico V magnet encapsulated in Teflon* TFE; Tefzel* ETFE bracket

Floating stir bar designed for low-speed stirring in tissue-culture applications. The stir bar is slightly raised off the bottom surface of the vessel to minimize grinding effect on cells. Constant action at low speeds. Legs can be compressed to fit through small openings. **Autoclavable/Tetrafluoroethylene (Teflon)**

*Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

Cat. No.DS6630	-0250	-0400	-1000	-2000	-4000
Fits Beaker Size, ml	250	400	1000	2000	4000
Dia. x Ht., mm	54 x 28	61 x 28	92 x 30	108 x 34	155 x 31
Dia. x Ht., in.	2-1/8 x 1-1/8	2-3/8 x 1-1/8	3-5/8 x 1-3/16	4-1/4 x 1-1/4	6-1/8 x 1-1/4
No. per Pkg	–	–	1	1	1
No. per Case	1	1	2	2	2

Teflon TFE

A

6160 Stirrer, high-density polyethylene; steel insert

Prevents glass breakage. Stirrer diameter at tip is 1-3/4 in. (44 mm). Steel rod O.D. is 1/4 in. (6 mm). Rod length is 18 in. (457 mm). May be cut with a hacksaw.

Cat. No.6160	-0010
No. per Pkg	1
No. per Case	12

6168 Stirring Rod, Tefzel* ETFE

Superior temperature (-100°C to +150°C) and chemical resistance. Flat paddle, 5/8 x 5/8 in. (16 mm x 16 mm) at one end; triangular paddle at other end. Overall length is 9-3/4 in. (248 mm).

Autoclavable/Tefzel ETFE *Or equivalent. Tefzel is a registered trademark of DuPont.

Cat. No.6168	-0010
No. per Pkg	1
No. per Case	12

Tefzel ETFE

A

6169 Stirring Rod, White polypropylene

Combines functions of stirring rod and rubber policeman. Flat paddle, 5/8 x 5/8 in. (16 mm x 16 mm) at one end; triangular paddle at other end. Overall length is 9-3/4 in. (248 mm). **Autoclavable**

Cat. No.6169	-0010
No. per Pkg	12
No. per Case	72

A

Tanks

CAUTION! Plastic tanks are generally subject to more severe conditions than plastic labware; exposure is constant, stresses are greater and different classes and concentrations of chemicals are involved. Please pay special attention to chemical compatibility.

USP VI

11100 Heavy-Duty Cylindrical Tanks with Cover, high-density polyethylene

Rigid tanks with hard surfaces and good temperature tolerance. Not autoclavable. Can be modified with factory-installed spigots up to 378L. Sizes: 19 to 757 liters. NALGENE Tank Liners are available: Cat. Nos.333050-XXXX non-sterile, and 343050-XXXX gamma-irradiated. 21CFR177.1520/USPVI

Cat. No.11100	-0005	-0007	-0010	-0015	-0030	-0055	-0080
Cap., L	19*	28*	38*	57*	113	208	303
Cap., gal.	5*	7-1/2*	10*	15*	30	55	80
Graduations, gal.	0.5	0.5	1	1	2.5	2.5	5
Graduations, L	2	–	–	4	10	10	20
Nom. Dim. O.D. x D, cm	28 x 38	30 x 46	33 x 51	33 x 69	46 x 76	56 x 91	61 x 122
Nom. Dim. O.D. x D, in.	11 x 15	12 x 18	13 x 20	13 x 27	18 x 30	22 x 36	24 x 48
Wall Thick., mm	4.7	4.7	4.7	4.7	4.7	6.3	6.3
Wall Thick., in.	3/16	3/16	3/16	3/16	3/16	1/4	1/4
No. per Case	1	1	1	1	1	1	1

Cat. No.11100	-0100	-0150	-0200
Cap., L	378	568	757
Cap., gal.	100	150	200
Graduations, gal.	5	10	25
Graduations, L	20	40	200
Nom. Dim. O.D. x D, cm	71 x 112	79 x 124	91 x 130
Nom. Dim. O.D. x D, in.	28 x 44	31 x 49	36 x 51
Wall Thick., mm	6.3	6.3	6.3
Wall Thick., in.	1/4	1/4	1/4
No. per Case	1	1	1

*Tanks do not have liter calibrations.

USP VI

11102 Tanks with Spigot, high-density polyethylene

Same as Cat. No. 11100 tanks but with Cat. No. 6421 needle-type spigot for draw-off. Cover included. Spigot accepts 5/8-in. I.D. tubing. USPVI

Cat. No.11102	-0005	-0007	-0010	-0015	-0030	-0055
Cap., L	19*	28*	38*	57*	114	208
Cap., gal.	5*	7-1/2*	10*	15*	30	55
No. per Case	1	1	1	1	1	1

*Tanks do not have liter calibrations.

54100 Lightweight Cylindrical Tanks with Cover, high-density polyethylene

Graduated, low-cost cylindricals. External flange extends beyond rim when used as liner for steel drums. Wall thickness approximately 2.4 mm (3/32 in.). **21CFR177.1520/USPVI/Graduated**

USP VI

Cat. No.54100	-0005	-0007	-0010	-0015	-0030	-0055
Cap., L	19	28*	38	57	114	208
Cap., gal.	5	7-1/2*	10	15	30	55
Nom. Dim. O.D. x D, cm	28 x 38	30 x 46	33 x 51	33 x 69	46 x 76	56 x 91
Nom. Dim. O.D. x D, in.	11 x 15	12 x 18	13 x 20	13 x 27	18 x 30	22 x 36
Wall Thick., mm	2.4	2.4	2.4	2.4	2.4	2.4
Wall Thick., in.	3/32	3/32	3/32	3/32	3/32	3/32
Graduations, gal.	0.5	0.5	1	1	2.5	2.5
Graduations, L	2	*	*	4	10	10
No. per Case	1	1	1	1	1	1

*Tanks do not have liter calibrations.

54102 Lightweight Cylindrical Tanks with Cover and Spigot, high-density polyethylene

HDPE tank, same as 54100, except equipped with Cat. No. 96423-0100 spigot for draw-off.
21CFR177.1520/USPVI/Graduated

USP VI

Cat. No.54102	-0005	-0007	-0010	-0015	-0030	-0055
Cap., L	19	28*	38*	57	114	208
Cap., gal.	5	7-1/2*	10*	15	30	55
Nom. Dim. O.D. x D, cm	28 x 38	30 x 46	33 x 51	33 x 69	46 x 76	56 x 91
Nom. Dim. O.D. x D, in.	11 x 15	12 x 18	13 x 20	13 x 27	18 x 30	22 x 36
Wall Thick., mm	2.4	2.4	2.4	2.4	2.4	2.4
Wall Thick., in.	3/32	3/32	3/32	3/32	3/32	3/32
Graduations, gal.	0.5	0.5	1	1	2.5	2.5
Graduations, L	2	*	*	4	10	10
No. per Case	1	1	1	1	1	1

*Tanks do not have liter calibrations.

11200 Cylindrical PP Tanks with Cover, polypropylene

Good resistance to stress cracking and tolerant of many organic chemicals, plus polypropylene tanks can be autoclaved. Very versatile at a much lower cost that stainless steel tanks. Tanks come with cover and can be modified with factory-installed spigots. Sizes: 19 to 378 liters. NALGENE Tank Liners are available: Cat. Nos. 333050-XXXX non-sterile, and 343050-XXXX gamma-irradiated.
21CFR177.1520/Autoclavable/USPVI

USP VI A

Cat. No.11200	-0005	-0007	-0010	-0015	-0030	-0055	-0100
Cap., L	19	28*	38*	57	114	208	378
Cap., gal.	5	7-1/2*	10*	15	30	55	100
Nom. Dim. O.D. x D, cm	28 x 38	30 x 46	33 x 51	33 x 69	46 x 76	56 x 91	71 x 112
Nom. Dim. O.D. x D, in.	11 x 15	12 x 18	13 x 20	13 x 27	18 x 30	22 x 36	28 x 44
Wall Thick., mm	4.7	4.7	4.7	4.7	4.7	6.3	6.3
Wall Thick., in.	3/16	3/16	3/16	3/16	3/16	1/4	1/4
Graduations, gal.	0.5	0.5	1	1	2.5	2.5	5
Graduations, L	2	–	–	4	10	10	20
No. per Case	1	1	1	1	1	1	1

**Tanks do not have liter calibrations.

CAUTION! Plastic tanks are generally subject to more severe conditions than plastic labware; exposure is constant, stresses are greater and different classes and concentrations of chemicals are involved. Please pay special attention to chemical compatibility.

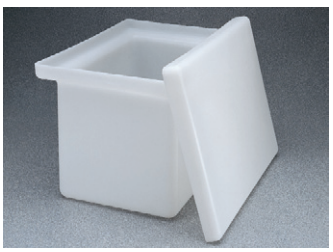
USP VI

14100 Rectangular Tanks with Cover, high-density polyethylene

HDPE resists most acids, alcohols and bases, plus it is impact and abrasion resistant. Very versatile at a much lower cost than stainless steel tanks. Tanks come with cover and can be modified with factory-installed spigot. Sizes: 8 to 170 liters. 21CFR177.1520/USPVI

Cat. No.14100	-0002	-0005	-0010	-0015
Cap., L	8	23	27	42
Cap., gal.	2	6	7	11
L x W x D, cm	20 x 20 x 20	36 x 25 x 25	31 x 31 x 31	46 x 31 x 31
L x W x D, in.	8 x 8 x 8	14 x 10 x 10	12 x 12 x 12	18 x 12 x 12
Wall Thick., mm	3.9	3.9	3.9	3.9
Wall Thick., in.	5/32	5/32	5/32	5/32
No. per Case	1	1	1	1

Cat. No.14100	-0020	-0040	-0045	-0065
Cap., L	57	57	114	170
Cap., gal.	15	15	30	45
L x W x D, cm	61 x 31 x 31	47 x 31 x 47	61 x 46 x 46	61 x 46 x 61
L x W x D, in.	24 x 12 x 12	18 x 12 x 18	24 x 18 x 18	24 x 18 x 24
Wall Thick., mm	3.9	3.9	3.9	3.9
Wall Thick., in.	5/32	5/32	5/32	5/32
No. per Case	1	1	1	1



USP VI A

14200 Rectangular Tanks with Cover, polypropylene

Good resistance to stress cracking and tolerant of many organic chemicals and polypropylene tanks can be autoclaved. Very versatile at a much lower cost that stainless steel tanks. Tanks come with cover and can be modified with factory-installed spigot. Sizes: 8 to 114 liters. 21CFR177.1520/USPVI/Autoclavable

Cat. No.14200	-0002	-0005	-0010	-0015	-0020	-0045
Cap., L	8	23	27	42	57	114
Cap., gal.	2	6	7	11	15	30
L x W x D, cm	20 x 20 x 20	36 x 25 x 25	31 x 31 x 31	46 x 31 x 31	61 x 31 x 31	61 x 46 x 46
L x W x D, in.	8 x 8 x 8	14 x 10 x 10	12 x 12 x 12	18 x 12 x 12	24 x 12 x 12	24 x 18 x 18
Wall Thick., mm	4.7	4.7	4.7	4.7	4.7	6.3
Wall Thick., in.	3/16	3/16	3/16	3/16	3/16	1/4
No. per Case	1	1	1	1	1	1

2650 Closed Dome Tanks, polypropylene

Designed for use as closed systems. Use for reagent storage, dispensing, or aseptic mixing (2653-0010, 2653-0020, 2651-0200 and 2654-xxxx). Closed Dome Tanks are non-metallic, made from polypropylene and comply with 21CFR177.1520 and USP VI criteria.Polypropylene tanks can be sterilized by autoclaving. Tanks have a 150 mm neck opening fitted with a gasketed closure for secure sealing. Closed Dome Closure with Mixer Support (Cat. No. 2651) allows mounting of BioTech Mixer. Tanks may be configured with spigots. **Autoclavable/21CFR177.1520/USPVI**

Cat. No.2650	-0020	-0030	-0055	-0100
Cap., L	75	115	210	380
Cap., gal.	20	30	55	100
O.D. x H (nom.), mm	419 x 813	470 x 981	559 x 1099	724 x 1321
O.D. x H (nom.), in.	16-1/2 x 32	18-1/2 x 38-5/8	22 x 43-1/4	28-1/2 x 52
Wall Thick. (nom.), mm	6.3	6.3	6.3	7.9
Wall Thick. (nom.), in.	1/4	1/4	1/4	5/16
No. per Case	1	1	1	1

75-L/20-gallon size

115-380L/30-100 gallon sizes

USP VI A

2651 Closed-Dome Tank Closure with Mixer Support Assembly, polypropylene, PVDF True Union Clamp

An overhead mixer support assembly for use with all closed-dome tanks (Cat. Nos. 2650). The unique, sanitary flange assembly allows for overhead mixing in a closed system. Designed specifically for use with NALGENE Biotech Mixer (Cat. No. 2653 and Lower Assemblies Cat. No. 2654), the assembly consists of a 6-inch PP screw closure and silicone gasket with a 2-inch sanitary ferrule welded in the center, a 2-inch silicone gasket, and a true union clamp. Can be connected to other 2-inch sanitary fittings for drain lines and closed system filling. Individually packaged. Autoclavable, but must be kept vertical if assembled with lower assembly (Cat. No. 2654). **Autoclavable/USPVI**

USP VI A

Cat. No.2651	-0200
No. per Case	1

Tank Accessories

USP VI NEW

333050 Tank Liners, Coex polyethylene film

Designed specifically for NALGENE Cylindrical Tanks 19L - 787L (5 gal – 200 gal). Open bag with flat bottom design eases fluid processing. Ideal for single-use biopharmaceutical and diagnostic reagent mixing. Film material is free of animal-derived components (ADCF). Individually packaged. Non-cytotoxic, food grade. NALGENE is your single source for tanks and liners. **USPVI/New**

Non-Sterile

		Fits Nalgene Tanks,	
Cat. No.	Liner Cap.	Cat. No	No. per Case
333050-0005	19L / 5 Gal	11100-0005, 54100-0005	10
333050-0007	28L / 7.5 Gal	11100-0007, 54100-0007	10
333050-0010	38L / 10 Gal	11100-0010, 54100-0010	10
333050-0015	57L / 15 Gal	11100-0015, 54100-0005	10
333050-0030	113L / 30 Gal	11100-0030, 54100-0030	10
333050-0055	208L / 55 Gal	11100-0055, 54100-0055	10
333050-0080	303L / 80 Gal	11100-0080, 54100-0080	10
333050-0100	378L / 100 Gal	11100-0100, 54100-0100	10
333050-0150	568L / 150 Gal	11100-0150, 54100-0150	10
333050-0200	757L / 200 Gal	11100-0200/54100-0200	10

*10 Individually heat-sealed packages in double polylined master carton.

USP VI NEW

343050 Tank Liners, Coex polyethylene film, gamma irradiated

Designed specifically for NALGENE Cylindrical Tanks 19L - 787L (5 gal – 200 gal). Open bag with flat bottom design eases fluid processing. Gamma-irradiated (25 - 40kGy). Ideal for single-use biopharmaceutical and diagnostic reagent mixing. Film material is free of animal-derived components. Individually packaged. Non-cytotoxic, food grade. NALGENE is your single source for tanks and liners. **USPVI/New**

		Fits Nalgene Tanks,	
Cat. No.	Liner Cap.	Cat. No	No. per Case
343050-0005	19L / 5 Gal	11100-0005, 54100-0005	101
343050-0007	28L / 7.5 Gal	11100-0007, 54100-0007	10
343050-0010	38L / 10 Gal	11100-0010, 54100-0010	10
343050-0015	57L / 15 Gal	11100-0015, 54100-0005	10
343050-0030	113L / 30 Gal	11100-0030, 54100-0030	10
343050-0055	208L / 55 Gal	11100-0055, 54100-0055	10
343050-0080	303L / 80 Gal	11100-0080, 54100-0080	10
343050-0100	378L / 100 Gal	11100-0100, 54100-0100	10
343050-0150	568L / 150 Gal	11100-0150, 54100-0150	10
343050-0200	757L / 200 Gal	11100-0200/54100-0200	10

*10 Individually heat-sealed packages in double polylined master carton.

CAUTION! Plastic tanks are generally subject to more severe conditions than plastic labware; exposure is constant, stresses are greater and different classes and concentrations of chemicals are involved. Please pay special attention to chemical compatibility.

96423 Needle Spigot, polypropylene; high-density polyethylene boss

For HDPE tanks up to 100 gal. PP spigots are installed on threaded HDPE boss which is welded onto tank at factory. Spigot has 1-1/8 - 12 straight female threads, 3/8-in. opening. Accepts 5/8-in. I.D. tubing. Boss fits only NALGENE tanks.

Cat. No.96423	-0100
No. per Case	1

6421 Needle-Type Tank Spigot, polypropylene; Teflon* TFE O-rings

Two Teflon O-rings for positive sealing. Only for NALGENE tanks up to 100 gals. with factory-welded threaded boss. Has 1-1/8 in. – 12 straight female threads. A replacement for Cat. No. 96423.

Cat. No.6421	-0010
No. per Pkg	1
No. per Case	12

*Or equivalent. Teflon is a registered trademark of DuPont.

2624 Autoclavable Dolly, stainless steel

Designed to move small NALGENE tanks (up to 30 gallons/115 liters) and carboys during daily use or servicing. Non-corrosive and chemically resistant to acids and bases. Casters won't leave marks on floor. **Autoclavable**

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Cat. No.2624	-0020
Maximum Weight Limit, lbs.	500
Maximum Weight Limit, kg	227.3
I.D. x H, in.	20-1/2 x 6-1/2
I.D. x H, mm	521 x 165
No. per Case	1

2654 Lower Assemblies for BioTech Mixers

Impeller and shaft combinations are designed for optimum mixing in specific sizes of NALGENE® tanks. Use only with BioTech Mixer Overhead Drives. Impellers and shafts of 2654 series are 316 stainless.

Autoclavable

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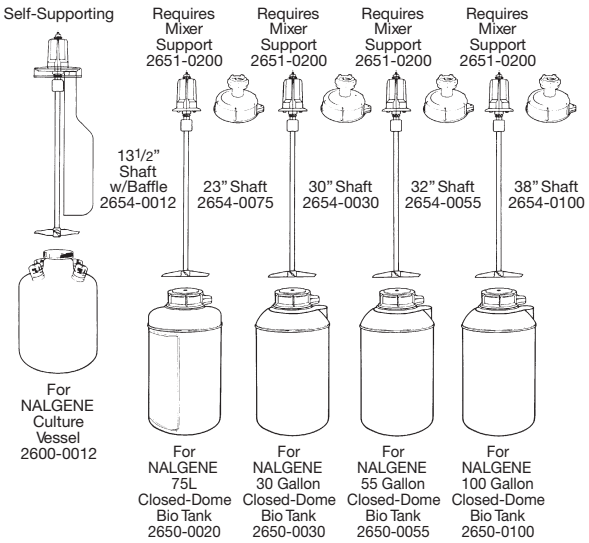
		Shaft Length		Mixer Support,	Shaft Dia.		Impeller Dia		Impeller	No.
Cat. No.	For Use With	in.	mm	Cat. No.	in.	mm	in.	mm	Material	per Case
2654-0012	12-liter culture vessel (2600-0012)	13.5	343	-	3/8	10	4	102	glass-filled polypropylene	1
2654-0030	30-gallon closed-dome bio-tank (2650-0030)	30	762	2651-0200*	1/2	13	6.8	173	stainless steel	1
2654-0055	55-gallon closed-dome bio tank (2650-0055)	32	813	2651-0200*	1/2	13	8.8	224	stainless steel	1
2654-0075	75-liter closed-dome tank (11150-0020)/75-L	23	584	2651-0200*	1/2	13	6.3	160	stainless steel	1
2654-0100	100-gallon closed-dome bio tank (2650-0100)	38	965	2651-0200*	1/2	13	10	254	stainless steel	1

*Sold separately.

Overhead Drive

2653-0010
(1/8-HP, 110V)

Lower Assemblies/Shafts & Impellers



2653 BioTech Mixer Overhead Drive

BioTech Mixer and Lower Assemblies are specifically designed for aseptic mixing on NALGENE® Closed Dome Tanks up to 400L. This mixer system mounts through a 2″ sanitary fitting on the tank closure.

Features:

- 1/8 HP Motor operates with variable speed up to 240 RPM.
- Mounts directly to tank for aseptic mixing.
- Programmable for unattended speed and time control.
- Clockwise and counter-clockwise operation.
- Overload detection and automatic shutdown.
- Diagnostic mode checks operation at startup.
- LCD readout of power, speed, time, mixing capacity and more.
- Suitable for liquids and slurries up the following limits

Solids < 20% by weight.
Specific gravity < 1.2
Viscosity < 500 centipoise

- Certified for use in U.S., Canada, Europe and Japan

Supplied mixer instructions outline simple setup and guidelines for care. When ordering tank to use with a BioTech Mixer, specify Closed Dome Closure with Mixer Support (Cat. No. 2651-0200). See Lower Assembly (Cat. No. 2654) for shaft/impeller selection information.

Cat. No.2653	-0010	-0020
Electrical requirements	110 Volt	220 Volt
Power, HP	1/8	1/8
No. per Case	1	1

See chart with Cat. No. 2654 for more ordering information

Test Tube Racks

Racks/Test Tube – Unwire™

Resmer™ manufacturing technology enhances performance of Unwire™ racks even under extreme conditions, including autoclaving, mechanical washing, chemical disinfection and freezing. Resmer™ manufactured products feature colors that will stay brighter longer.

Or choose economical polypropylene. Unwire test tube racks have no coating that can chip or peel and permit corrosion. Excellent replacement for wire racks. Withstand most lab chemicals. They do not float in water baths. Excellent thermal properties and won't get brittle in freezers. Grid design allows tubes to be tipped from side to side for clearly marking place.

NOTE: Do not autoclave polypropylene racks.

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5970 Unwire™ Test Tube Racks, ResMer™ Manufacturing Technology

Full-size Unwire test tube racks securely hold a full load of test tubes or centrifuge tubes in the following popular sizes: 13-, 16-, 20-, 25- and 30-mm. Up to 72 of the smaller diameter tubes can be held at once. Molded in six bright, permanent colors Resmer™ manufacturing technology makes these racks keep their bright colors longer. Useful in a wide temperature range with good chemical resistance.

Autoclavable

Cat. No.	Tube Size, mm	Color	L x W x H, mm	Array	No. per Pkg	No. per Case
5970-0013	13	White	200 x 102 x 57	6 x 12	1	8
5970-0113	13	Orange	200 x 102 x 57	6 x 12	1	8
5970-0213	13	Yellow	200 x 102 x 57	6 x 12	1	8
5970-0313	13	Blue	200 x 102 x 57	6 x 12	1	8
5970-0413	13	Green	200 x 102 x 57	6 x 12	1	8
5970-0513	13	Red	200 x 102 x 57	6 x 12	1	8
5970-0016	16	White	248 x 127 x 70	6 x 12	1	8
5970-0116	16	Orange	248 x 127 x 70	6 x 12	1	8
5970-0216	16	Yellow	248 x 127 x 70	6 x 12	1	8
5970-0316	16	Blue	248 x 127 x 70	6 x 12	1	8
5970-0416	16	Green	248 x 127 x 70	6 x 12	1	8
5970-0516	16	Red	248 x 127 x 70	6 x 12	1	8
5970-0020	20	White	250 x 102 x 83	4 x 10	1	8
5970-0120	20	Orange	250 x 102 x 83	4 x 10	1	8
5970-0220	20	Yellow	250 x 102 x 83	4 x 10	1	8
5970-0320	20	Blue	250 x 102 x 83	4 x 10	1	8
5970-0420	20	Green	250 x 102 x 83	4 x 10	1	8
5970-0520	20	Red	250 x 102 x 83	4 x 10	1	8
5970-0025	25	White	300 x 121 x 92	4 x 10	1	8
5970-0125	25	Orange	300 x 121 x 92	4 x 10	1	8
5970-0225	25	Yellow	300 x 121 x 92	4 x 10	1	8
5970-0325	25	Blue	300 x 121 x 92	4 x 10	1	8
5970-0425	25	Green	300 x 121 x 92	4 x 10	1	8
5970-0525	25	Red	300 x 121 x 92	4 x 10	1	8
5970-0030	30	White	283 x 108 x 83	3 x 8	1	8
5970-0130	30	Orange	283 x 108 x 83	3 x 8	1	8
5970-0230	30	Yellow	283 x 108 x 83	3 x 8	1	8
5970-0330	30	Blue	283 x 108 x 83	3 x 8	1	8
5970-0430	30	Green	283 x 108 x 83	3 x 8	1	8
5970-0530	30	Red	283 x 108 x 83	3 x 8	1	8

A

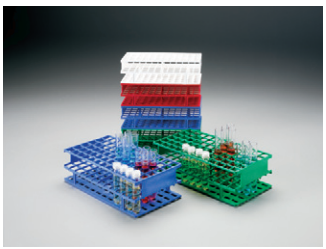
5972 Unwire™ Half-Racks, ResMer™ Manufacturing Technology

More space-efficient than full-size test tube racks. Fit easily in ice or water baths and won't float. All the features of full-size Unwire test tube racks. Resmer™ manufacturing technology makes these racks keep their bright colors longer. Useful in a wide temperature range with good chemical resistance. **Autoclavable**

Cat. No.	Tube Size, mm	Color	L x W x H, mm	Array	No. per Pkg	No. per Case
5972-0013	13	White	102 x 102 x 56	6 x 6	1	8
5972-0016	16	White	126 x 126 x 68	6 x 6	1	8
5972-0020	20	White	128 x 103 x 83	4 x 5	1	8
5972-0025	25	White	122 x 122 x 75	4 x 4	1	8
5972-0030	30	White	109 x 109 x 84	3 x 3	1	8
5972-0313	13	Blue	102 x 102 x 56	6 x 6	1	8
5972-0316	16	Blue	126 x 126 x 68	6 x 6	1	8
5972-0320	20	Blue	128 x 103 x 83	4 x 5	1	8
5972-0325	25	Blue	122 x 122 x 75	4 x 4	1	8
5972-0330	30	Blue	109 x 109 x 84	3 x 3	1	8
5972-0413	13	Green	102 x 102 x 56	6 x 6	1	8
5972-0416	16	Green	126 x 126 x 68	6 x 6	1	8
5972-0420	20	Green	128 x 103 x 83	4 x 5	1	8
5972-0430	30	Green	109 x 109 x 84	3 x 3	1	8
5972-0513	13	Red	102 x 102 x 56	6 x 6	1	8
5972-0516	16	Red	126 x 126 x 68	6 x 6	1	8
5972-0520	20	Red	128 x 103 x 83	4 x 5	1	8
5972-0530	30	Red	109 x 109 x 84	3 x 3	1	8

5976 Unwire™ Test Tube Racks, polypropylene

Same innovative design as Unwire test tube racks made using ResMer™ manufacturing technology. Will not float in water baths. Stackable when empty to save space. Securely hold a full load of test tubes. Racks are not autoclavable.



Cat. No.	Tube Size, mm	Color	L x W x H, mm	Array	No. per Pkg	No. per Case
5976-0013	13	White	200 x 102 x 57	6 x 12	1	8
5976-0016	16	White	248 x 127 x 70	6 x 12	1	8
5976-0313	13	Blue	200 x 102 x 57	6 x 12	1	8
5976-0316	16	Blue	248 x 127 x 70	6 x 12	1	8
5976-0413	13	Green	200 x 102 x 57	6 x 12	1	8
5976-0416	16	Green	248 x 127 x 70	6 x 12	1	8
5976-0513	13	Red	200 x 102 x 57	6 x 12	1	8
5976-0516	16	Red	248 x 127 x 70	6 x 12	1	8

NOTE: Polypropylene racks are not autoclavable.

5929 Test Tube Racks, polycarbonate

Handles make carrying easy. Holes are keyed with molded-in numbers and letters for easy identification of tubes. When empty, can stack with any other racks of the same length. Do not float in water baths. Autoclaving will reduce strength over time. **Autoclavable**

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Cat. No.5929	-0013	-0016	-0020	-0030
Tube Dia., mm	10-13	13-16	16-20	25-30
Array	6 x 12	4 x 10	4 x 10	3 x 8
Size L x W, cm	28.5 x 11.5	28.5 x 11.5	28.5 x 11.5	32 x 11.5
No. per Pkg	1	1	1	1
No. per Case	4	4	4	4

5930 Test Tube Racks, polypropylene

Handles make carrying easy. Holes are keyed with molded-in numbers and letters for easy identification of tubes. When empty, can stack with any other racks of the same length. Superior chemical resistance. Not autoclavable. For autoclavable racks, see Cat. No. 5972.

Cat. No.5930	-0013	-0016	-0020	-0025	-0030
Tube Dia., mm	10-13	13-16	16-20	21-25	25-30
Array	6 x 12	4 x 10	4 x 10	3 x 8	3 x 8
Size L x W, cm	28.5 x 11.5	28.5 x 11.5	28.5 x 11.5	32 x 11.5	32 x 11.5
No. per Pkg	1	1	1	1	1
No. per Case	4	4	4	4	4

NOTE: Polypropylene racks are not autoclavable.

5935 Slant Racks, polycarbonate

Unique end plate design allows 5° or 20° slant when rack is set down on either side. Autoclave tubes of media in the rack. While media is still hot, set rack on bench at desired angle. Media will harden with a consistent slant. Useful for incubating liquid cultures on a slant. Keyed with numbers and letters for identification. Stackable. Do not float in water baths. Autoclaving will reduce strength over time.

Autoclavable

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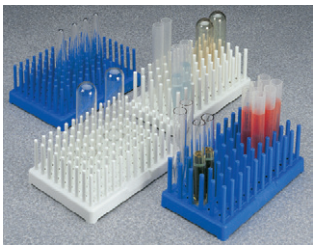
Cat. No.5935	-0016	-0020
Tube Size, mm	15-16	20
Array	4 x 10	4 x 10
Size, L x W, mm	285 x 115	285 x 115
Width of End Plates at Top, cm	15.5	15.5
No. per Pkg	1	1
No. per Case	4	4

Test Tube Racks



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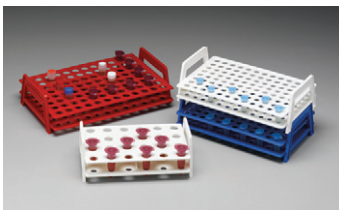
5977 Test Tube Peg Racks, filled polypropylene

Hold sample collection tubes, reaction tubes or similar-diameter tubes. Will not float in a water bath. Can be used to dry inverted tubes. Also can be used to hold and dry electrophoresis and chromatography plates. Chemical resistant. **Autoclavable**

Cat. No.5977	-0013	-0017	-0313	-0317
Tube Size, mm	10-13	14-17	10-13	14-17
Color	White	White	Blue	Blue
Array	8 x 12	5 x 10	8 x 12	5 x 10
L x W x H, mm	179 x 127 x 64	187 x 105 x 70	179 x 127 x 64	187 x 105 x 70
No. per Pkg	2	2	2	2
No. per Case	8	8	8	8



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5973 Microcentrifuge Tube Racks, ResMer™ Manufacturing Technology

ResMer™ manufacturing technology makes these racks retain their colors and performance in harsh lab environments. Useful in wide temperature range and good chemical resistance. Each hole has molded-in letters and numbers for easy sample identification. Stackable when empty or full. **Autoclavable**

Cat. No.	Tube Cap., ml	Array	Color	L x W x H, mm	No. per Pkg	No. per Case
5973-0005	0.5	4 x 6	White	146 x 92 x 54	1	8
5973-0015	1.5	4 x 6	White	143 x 90 x 52	1	8
5973-9005	0.5	8 x 12	White	171 x 112 x 54	1	4
5973-9015	1.5	8 x 12	White	201 x 131 x 54	1	4
5973-9305	0.5	8 x 12	Blue	171 x 112 x 54	1	4
5973-9315	1.5	8 x 12	Blue	201 x 131 x 54	1	4
5973-9515	1.5	8 x 12	Red	201 x 131 x 54	1	4

5974 Floating Microtube Racks, polypropylene

Thaw, cool and incubate samples at elevated or reduced temperatures. Racks will float with a full load of filled tubes. Tubes are supported below the lip. On benchtop, rack legs prevent bottom of tubes from touching bench surface. Excellent temperature resistance from -70°C to 100°C. Each hole has molded-in letters and numbers for easy sample identification.

Square

Cat. No.5974	-0005	-0404
Color	Black	White
Tube Size, ml	0.5	1.0, 1.2, 1.5 and 2.0
L x W x H, mm	103 x 103 x 65	103 x 103 x 65
Array	4 x 4	4 x 4
No. per Pkg	4	4
No. per Case	16	16

Round

Cat. No.5974	-4015	-1015
Color	White	White
Tube Size, ml	1.0, 1.2, 1.5 and 2.0	1.0, 1.2, 1.5 and 2.0
Array	8	20
Fit NALGENE Beakers, ml	400	1000
Dia., mm	66	96
Dia., in.	2-5/8	3-3/4
No. per Pkg	4	4
No. per Case	16	16

NOTE: Polypropylene racks are not autoclavable.

Tubing

Warning! Not intended for medical or medical device use. NALGENE 180 and 980 PVC Tubing contain DEHP [Bis (2-ethylhexyl)] phthalate a commonly used plasticizer. It is known to the state of California Environmental Protection Agency this chemical causes cancer or reproductive toxicity.

8000 NALGENE 180 Clear Plastic Tubing, Transparent, flexible, versatile, economical

USP VI A

NALGENE 180 Tubing sets a new standard of purity and quality in lab-grade clear plastic tubing. This autoclavable tubing is made from the highest-grade resins and special plasticizers; no fillers or extenders are ever added. It resists a wide range of chemicals, is dimensionally stable and highly resistant to hardening and discoloration. See "Use and Care Guidelines. NALGENE 180 is equivalent to Tygon** R-3603. It offers a "Lab Use" Durometer (Shore A) of 55. Choose from a variety of sizes.* Coils marked continuously with I.D., regulatory compliance, and interval markings*. For metric measurement, see Cat. No. 8001. Selected sizes come in 10-, 50-, 100- and 250-ft. boxes or 500-ft. reels. NALGENE 180 Tubing is made of Food-Grade materials which comply with U.S. Pharmacopoeia Class VI Requirements for Plastic Materials and USDA regulations. NALGENE tubing is not a medical device. See separate listings below for selected sizes available in 10-ft. coils. 10-ft. coils are polybagged separately (5 coils per box). Excellent for many small benchtop applications. Short lengths permit quick set ups with less waste. No boxes or reels to store. **Autoclavable/USPVI/Transparent**

*Small tubing not printed.

** Registered Trademark of St. Gobain Performance Plastics

*50-, 100-, 250-, 500-ft. Cases

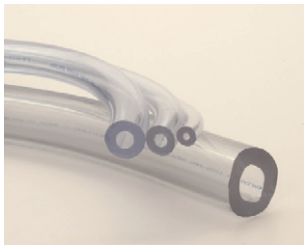
Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 125°F; 52°C	No. per Case
8000-0002	1/32 x 3/32 x 1/32	60	30	50
8000-0004	1/16 x 1/8 x 1/32	48	24	50
8000-0006	3/32 x 5/32 x 1/32	42	21	50
8000-0010	1/8 x 3/16 x 1/32	34	17	50
8000-9010	1/8 x 3/16 x 1/32	34	17	250
8000-0020	1/8 x 1/4 x 1/16	50	25	50
8000-9020	1/8 x 1/4 x 1/16	50	25	250
8000-0025	5/32 x 7/32 x 1/32	30	15	50
8000-0030	3/16 x 5/16 x 1/16	40	20	50
8000-9030	3/16 x 5/16 x 1/16	40	20	250
8000-0060	1/4 x 3/8 x 1/16	34	17	50
8000-4060	1/4 x 3/8 x 1/16	34	17	100
8000-9060	1/4 x 3/8 x 1/16	34	17	250
8000-5060	1/4 x 3/8 x 1/16	34	17	500
8000-0070	1/4 x 7/16 x 3/32	44	22	50
8000-0080	1/4 x 1/2 x 1/8	52	26	50
8000-4080	1/4 x 1/2 x 1/8	52	26	100
8000-0090	5/16 x 7/16 x 1/16	30	15	50
8000-4090	5/16 x 7/16 x 1/16	30	15	100
8000-9090	5/16 x 7/16 x 1/16	30	15	250
8000-0100	5/16 x 1/2 x 3/32	40	20	50
8000-0110	5/16 x 9/16 x 1/8	46	23	50
8000-0120	3/8 x 1/2 x 1/16	26	13	50
8000-4120	3/8 x 1/2 x 1/16	26	13	100
8000-9120	3/8 x 1/2 x 1/16	26	13	250

180 tubing continues on next page

A USP VI

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 125°F; 52°C	No. per Case
8000-5120	3/8 x 1/2 x 1/16	25	13	500
8000-0130	3/8 x 9/16 x 3/32	36	18	50
8000-0140	3/8 x 5/8 x 1/8	44	22	50
8000-4140	3/8 x 5/8 x 1/8	44	22	100
8000-0160	7/16 x 5/8 x 3/32	34	17	50
8000-0180	1/2 x 5/8 x 1/16	22	11	50
8000-9180	1/2 x 5/8 x 1/16	22	11	250
8000-0190	1/2 x 11/16 x 3/32	28	14	50
8000-0200	1/2 x 3/4 x 1/8	34	17	50
8000-4200	1/2 x 3/4 x 1/8	34	17	100
8000-0260	5/8 x 7/8 x 1/8	28	14	50
8000-0310	3/4 x 1 x 1/8	26	13	50
8000-0350	1 x 1-1/4 x 1/8	22	11	50
8000-1350	1 x 1-1/4 x 1/8	22	11	50†
8000-0370	1 x 1-3/8 x 3/16	28	14	50

†** 5 x 10 ft. coils



A USP VI

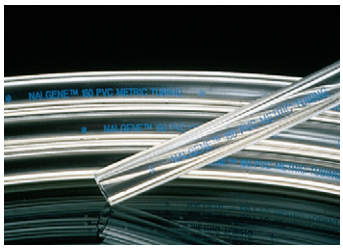
8000 NALGENE 180 Clear Plastic Vacuum Tubing

Thick-walled PVC tubing withstands full vacuum (29.9 in. Hg) at room temperature. Material is Food-Grade and complies with USP VI and USDA regulations. Available in seven sizes – 50-ft. or convenient 10-ft. boxes. **Autoclavable/USPVI/Transparent**

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 125°F; 52°C	Ft. per Case
8000-0055	3/16 x 9/16 x 3/16	62	31	50
8000-0065	1/4 x 5/8 x 3/16	56	28	50
8000-1065	1/4 x 5/8 x 3/16	56	28	10
8000-1090	5/16 x 7/16 x1/16	30	15	50
8000-0145	3/8 x 7/8 x 1/4	54	27	50
8000-1145	3/8 x 7/8 x 1/4	54	27	10
8000-0210	1/2 x 1-1/8 x 5/16	52	26	50
8000-1210	1/2 x 1-1/8 x 5/16	52	26	10
8000-1270	5/8 x 1-3/8 x 3/8	56	28	10
8000-1325	3/4 x 1-1/2 x 3/8	46	23	10
8000-1375	1 x 2 x 1/2	46	23	10

8001 NALGENE 180 Metric Tubing

NALGENE 180 is offered in 17 true metric sizes to fit your lab equipment. Food-Grade material complies with USP VI, and USDA regulations. Replaces "close-to-size" Imperial-measure tubing that could leak at a metric connection. Clearly labeled and marked for easy cutting. In 25-meter coils (10-meter for larger sizes). **Autoclavable/USPVI/Transparent**



USP VI A

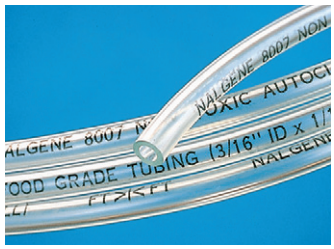
Cat. No.	I.D. x O.D. x Wall, mm	Operating Pressure, kPa at 73°F/23°C	Operating Pressure, kPa at 125°F/52°C	Meters per Case
8001-0102*	1.0 x 2.0 x 0.5	100/690	50/345	25
8001-0204*	2.0 x 4.0 x 1.0	100/690	50/345	25
8001-0305*	3.0 x 5.0 x 1.0	80/552	40/276	25
8001-0406*	4.0 x 6.0 x 1.0	66/455	33/228	25
8001-0407	4.0 x 7.0 x 1.5	86/593	43/296	25
8001-0508	5.0 x 8.0 x 1.5	74/510	37/255	25
8001-0609	6.0 x 9.0 x 1.5	66/455	33/228	25
8001-0610	6.0 x 10.0 x 2.0	80/552	20/276	25
8001-0710	7.0 x 10.0 x 1.5	60/414	30/207	25
8001-0811	8.0 x 11.0 x 1.5	54/372	27/186	25
8001-0812	8.0 x 12.0 x 2.0	66/455	33/228	25
8001-0913	9.0 x 13.0 x 2.0	62/427	31/214	25
8001-1014	10.0 x 14.0 x 2.0	56/386	28/193	25
8001-1216	12.0 x 16.0 x 2.0	50/345	25/172	25
8001-1520	15.0 x 20.0 x 2.5	50/345	25/172	10
8001-1823	18.0 x 23.0 x 2.5	44/303	22/152	10
8001-2025	20.0 x 25.0 x 2.5	40/276	20/138	10

*Small tubing not printed.

8007 NALGENE 380 Clear Plastic Tubing with Higher Durometer

A high-quality, high-performance lab tubing like NALGENE 180 tubing, but designed for different working conditions. Less flexible than NALGENE 180 tubing, NALGENE 380 tubing withstands higher working pressures. It's also more resistant to crimping and kinking. This clear tubing resists a wide range of chemicals. Excellent for food and beverage applications.

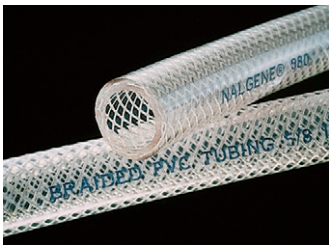
- Durometer (Shore A) of 65
- Convenient markings on every coil.*
- Made of food-grade materials which comply with USDA, USP VI, NSF-51, 3-A Regulations. Compliance marked on the tubing. **Autoclavable/Transparent**



A

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 125°F; 52°C	Ft. per Case
8007-0020	1/8 x 1/4 x 1/16	68	34	50
8007-0030	3/16 x 5/16 x 1/16	54	27	50
8007-0060	1/4 x 3/8 x 1/16	46	23	50
8007-0090	5/16 x 7/16 x 1/16	40	20	50
8007-0120	3/8 x 1/2 x 1/16	34	17	50
8007-0310	3/4 x 1 x 1/8	34	17	50

*Small tubing is not printed.



8005 NALGENE 980 Braided Clear Plastic Tubing

Braided, reinforced tubing is designed for high-pressure applications. It has a durometer (Shore A) of 65 and is more flexible than most competitive reinforced PVC tubing. This extra flexibility makes it easier to bend into place and permits tighter compression of crimp fittings for a secure fit. Tubing is made with Food-Grade materials*. Excellent for use with weak acids, weak bases and salt solutions. Not recommended for vacuum applications. Manufactured to strict I.D. tolerances for easy identification and reordering, inside diameter and operating pressure are clearly imprinted in blue. **Transparent**

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 125°F; 52°C	Ft. per Case
8005-0040	3/16 x 3/8 x 3/32	276	138	50
8005-0070	1/4 x 7/16 x 3/32	276	138	50
8005-0100	5/16 x 1/2 x 3/32	276	138	50
8005-0130	3/8 x 9/16 x 3/32	250	125	50
8005-0190	1/2 x 3/4 x 1/8	230	115	50
8005-0260	5/8 x 7/8 x 1/8	230	115	50
8005-0310	3/4 x 1 x 1/8	176	88	50
8005-0360	1 x 1-5/16 x 5/32	140	70	50
8005-0378	1-1/4 x 1-5/8 x 3/16	100	50	50
8005-0388	1-1/2 x 1-7/8 x 3/16	80	40	50

*Resin material complies with 21 CFR for food packaging.

NALGENE 280 PUR Tubing

NALGENE 280 Ester-Based Tubing is an extremely tough product featuring excellent abrasion resistance, low-temperature resilience and flex-fatigue resistance.

8030 NALGENE 280 PUR Tubing, Ester-grade

NALGENE 280 Ester-based Tubing is an extremely tough product featuring excellent abrasion resistance, low-temperature resilience and flex-fatigue resistance. Pure polyurethane-contains no plasticizers and low levels of extracables, which make it ideal for high-purity applications. Resistant to atmospheric ozone, aliphatic hydrocarbons and petroleum products. Higher physical properties than PVC products (tensile strength, tear resistance, elongation, etc.) makes it ideal for peristaltic pump applications. Not recommended for aqueous solutions. Note: NALGENE PUR tubing is not autoclavable, but can be gas-sterilized. **Transparent**

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 130°F; 54°C	Ft. per Case
8030-0020	1/8 x 1/4 x 1/16	110	55	50
8030-0060	1/4 x 3/8 x 1/16	76	38	50
8030-0120	3/8 x 1/2 x 1/16	56	28	50
8030-0180	1/2 x 5/8 x 1/16	40	20	50
8030-0225	5/8 x 3/4 x 1/16	36	18	50
8030-0310	3/4 x 1 x 1/8	56	28	50
8030-0350	1 x 1-1/4 x 1/8	40	20	50

8010 NALGENE 489 Linear Low-Density Polyethylene Tubing

Economically priced. Translucent; fluid levels easily seen. Food-Grade materials comply with 21 CFR 177.1520 for food packaging. Nontoxic, odorless and tasteless. Excellent for laboratory and industrial use. Shore D 50. Not autoclavable but can be chemically sterilized. Less flexible than NALGENE 180 tubing, but can be bent to facilitate set-ups. Superior chemical resistance.

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 145°F; 63°C	Ft. per Case
8010-0125	1/8 x 1/4 x 1/16	358	179	100
8010-0187	3/16 x 5/16 x 1/16	268	134	100
8010-0250	1/4 x 3/8 x 1/16	214	107	100
8010-0375	3/8 x 1/2 x 1/16	152	76	100
8010-0500	1/2 x 5/8 x 1/16	118	59	100
8010-0625	5/8 x 3/4 x 1/16	96	48	100
8010-0750	3/4 x 1 x 1/8	154	77	50
8010-1000	1 x 1-1/4 x 1/8	120	60	50

8020 NALGENE 689 Polypropylene Tubing

Available in popular sizes to fit tubing fittings. Food-Grade materials comply with 21 CFR 177.1520. for food packaging. Translucent. Excellent chemical resistance to many acids and alkalies. Unaffected by most solvents at ambient temperatures. Semi-rigid – Durometer of 75 (Shore D). **Autoclavable**

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 125°F; 52°C	Ft. per Case
8020-0250	3/16 x 1/4 x 1/32	110	55	100
8020-0370	1/4 x 3/8 x 1/16	272	136	100
8020-0437	5/16 x 7/16 x 1/16	228	114	100
8020-0500	3/8 x 1/2 x 1/16	194	97	100
8020-0625	1/2 x 5/8 x 1/16	150	75	100

A

A USP VI

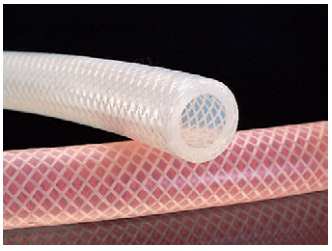
8060 NALGENE 50 Platinum-Cured Silicone Tubing

This flexible (50, Shore A), durable, high-purity tubing is designed for a variety of pump and transfer applications including pharmaceutical, laboratory; bioprocess manufacturing; and food and beverage applications. There are no phthalate plasticizers that can leach out into transported fluid. Manufactured under strict process controls for precise dimensional tolerances. Material complies with Food-Grade, USDA, USP Class VI and 3A standards. Translucent. Non-cytotoxic, non-pyrogenic and non-hemolytic. NOTE: Not intended for invasive use. **Autoclavable/USPVI**

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 320°F; 160°C	Ft. per Case
8060-0020	1/16 x 1/8 x 1/32	15	9	50
8060-0030	1/8 x 1/4 x 1/16	21	12	50
8060-0040	3/16 x 5/16 x 1/16	13	8	50
8060-0050	3/16 x 3/8 x 3/32	14	8	50
8060-0060	1/4 x 3/8 x 1/16	12	7	50
8060-0070	1/4 x 7/16 x 3/32	17	10	50
8060-0080	1/4 x 1/2 x 1/8	17	10	50
8060-0100	5/16 x 1/2 x 3/32	16	10	50
8060-0120	3/8 x 1/2 x 1/16	11	7	50
8060-0130	3/8 x 9/16 x 3/32	12	7	50
8060-0140	3/8 x 5/8 x 1/8	14	8	50
8060-0190	1/2 x 11/16 x 3/32	10	6	50
8060-0200	1/2 x 3/4 x 1/8	12	7	50
8060-0260	5/8 x 7/8 x 1/8	12	7	50
8060-0310	3/4 x 1 x 1/8	9	5	50

Designed to provide extended pump life in peristaltic applications.

Cat. No.	Fits Pump Tube Size	Hose Barb, in.	Hose Barb, mm	Ft. per Case
8060-3015	#15	3/16	4.8	25
8060-3016	#16	1/8	3.2	25
8060-3017	#17	1/4	6.4	25
8060-3018	#18	5/16	7.9	25
8060-3024	#24	1/4	6.4	25
8060-3025	#25	3/16	4.8	25
8060-3173	#73	3/8	9.5	25
8060-3182	#82	1/2	12.7	25



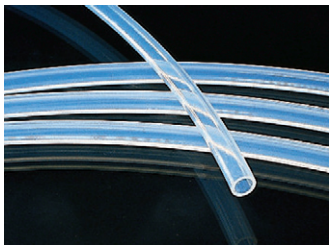
A USP VI

8061 NALGENE 65 Braided Platinum-Cured Silicone Tubing

Manufactured with interwoven polyester braid for additional pressure and kink resistance, Shore A 65. Durable, high-purity tubing is designed for a variety of pump and transfer applications including pharmaceutical, laboratory; bioprocess manufacturing; and food and beverage applications. There are no phthalate plasticizers that can leach out into transported fluid. Manufactured under strict process controls for precise dimensional tolerances. Material complies with Food-Grade, USDA, USP Class VI and 3A standards. Translucent. Non-cytotoxic, non-pyrogenic and non-hemolytic. NOTE: Not intended for invasive use. **Autoclavable/USPVI**

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 320°F; 160°C	Ft. per Case
8061-3070	1/4 x 9/16 x 5/32	156	78	25
8061-3130	3/8 x 21/32 x 5/32	136	68	25
8061-3190	1/2 x 13/16 x 5/32	126	63	25

8051 NALGENE 870 PFA Tubing



The most chemical- and corrosion-resistant NALGENE tubing. Translucent and semi-rigid (60 Shore D†). Excellent chemical resistance – matches NALGENE 890 FEP tubing but with a wider temperature range (-270°C to 260°C). Very low water absorption. Resin complies with USDA regulations 21 CFR 177.1550 for food use. For low-pressure use with mechanical, compression-type fittings‡. Can be sterilized by autoclaving, gas, dry heat and disinfectants. Do not sterilize by radiation. Two 25-ft.coils per case except larger sizes. NOTE: Should not be used with molten alkali metals, elemental fluorine and fluorine precursors at elevated temperatures or concentrated perchloric acid. **Autoclavable/PFA**

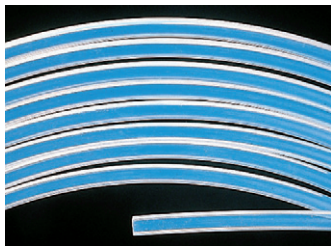
Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 185°F; 85°C	Ft. per Case
8051-0125	1/16 x 1/8 x 1/32	478	239	50*
8051-0187	1/8 x 3/16 x 1/32	274	137	50*
8051-0250	5/32 x 1/4 x 3/64	290	145	50*
8051-0312	3/16 x 5/16 x 1/16	252	126	50*
8051-0375	1/4 x 3/8 x 1/16	248	124	25
8051-0437	5/16 x 7/16 x 1/16	182	91	25
8051-0500	3/8 x 1/2 x 1/16	170	85	25
8051-0625	1/2 x 5/8 x 1/16	130	65	25

*Two 25-ft. coils per case. Packaged in two-25ft coils.

†Approximately 99 Shore A.

‡At room temperature with compression fitting.

8050 NALGENE 890 FEP Tubing



This translucent, semi-rigid (58, Shore D*) tubing resists most known chemicals at room temperature and offers high temperature resistance. NALGENE 890 FEP tubing is rated excellent for: acids – dilute, weak, strong or concentrated; aliphatic alcohols, aldehydes, bases, esters, hydrocarbons – aliphatic, aromatic and halogenated; ketones and strong oxidizing agents.

NALGENE 890 FEP tubing is used for demanding lab applications such as: chromatography, trace metal analysis, pollution sampling, highly reactive catalyst procedures, metallurgical corrosion testing, pharmaceutical work, dissolutions and hot acid etchings. Superior non-stick characteristics are useful in transferring biological preparations where protein binding/adsorption is a problem. Also eases movement of viscous, aggressive compounds. For high-purity analysis, can be rigorously cleaned in boiling nitric acid. Non-cytotoxic and non-contaminating for critical high-purity work. Resin complies with 21 CFR 177.1550 for food contact. For low pressure use with mechanical, compression-type fittings. Can be sterilized by autoclaving, gas, dry heat and disinfectants. Do not radiation-sterilize.

Autoclavable/Teflon FEP *Approximately 99 Shore A.

NOTE: Should not be used with molten alkali metals, elemental fluorine and fluorine precursors at elevated temperatures or concentrated perchloric acid.

Cat. No.	I.D. x O.D. x Wall, in.	Max. Press. psig at 73°F; 23°C	Max. Press. psig at 185°F; 85°C	Ft. per Case
8050-0125	1/16 x 1/8 x 1/32	440	220	50*
8050-0187	1/8 x 3/16 x 1/32	250	125	50*
8050-0250	3/16 x 1/4 x 1/32	140	70	50*
8050-0310	1/4 x 5/16 x 1/32	104	52	50*
8050-0375	5/16 x 3/8 x 1/32	84	42	50*
8050-0437	3/8 x 7/16 x 1/32	70	35	50*
8050-0500	7/16 x 1/2 x 1/32	60	30	50*
8050-0562	1/2 x 9/16 x 1/32	52	26	50*

*Packaged in two 25-ft. lengths per case.

Selection Guide For NALGENE® Tubing Products

Material	ASTM	180	380	980	890	870	50/65	280	489	689
Resin		PVC	PVC	PVC, Reinforced	FEP	PFA	Silicone, Platinum cured	PUR, Ester	LLDPE	PP
Equivalence		Tygon® R-3603	Tygon® B-44-3/ B-44-4X/ S-50-HL	Tygon® B-44-4x I.B.						
Regulatory Compliance		USDA, Food Grade USP VI	USDA, Food Grade, 3-A, NSF-51 USP VI	USDA, Food Grade	USDA, Food Grade	USDA, Food Grade	USDA, Food Grade, 3-A, USP VI	N/A	USDA, Food Grade	USDA, Food Grade
Durometer (Shore)	D2240	55 (A)	65 (A)	65 (A)	58 (D)	60 (D)	50 (A)/65 (A)	85 (A)	50 (D)	75 (D)
Specific Gravity	D792	1.19	1.20	1.20	2.17	2.15	1.15	1.18	0.92	0.90
Operating Tmp. Range (°F)	D789	–25 to 160	–10 to 175	–5 to 180	–103 to 400	–454 to 500	–80 to 450	–70 to 185	–100 to 175	–25 to 250
Operating Tmp. Range (°C)	D2117 D746	–32 to 71	–23 to 79	–21 to 82	–75 to 205	–268 to 260	–62 to 232	–56 to 85	–73 to 79	–4 to 121
Vacuum		Very Low†	Very Low	No Vac.	Full Vac.	Full Vac.	No Vac.	Very Low	Full Vac.	Full Vac.
Sterilization*		Autoclave Gas Chemical	Autoclave Gas Chemical	Gas Chemical	Autoclave Gas Chemical	Autoclave Gas Chemical	Autoclave Gas Chemical Radiation	Gas	Gas Chemical	Autoclave
Tensile Strength, psi	D638 D412	1650	2200	2000	3000	3000	1250	6000	1700	3700
Color		Crystal Clear	Crystal Clear	Clear	Transparent	Transparent	Translucent	Transparent	Translucent	Translucent
Odor		Slight	Slight	Slight	None	None	None	Slight	Slight	None
Taste Imparted		None	None	None	None	None	None	None	None	None
Tear Strength		Good	Good	Very Good	Good	Good	Fair	Excellent	Very Good	Excellent
Bend Radius		4 x O.D.	5 x O.D.	6 x O.D.	8 x O.D.	10 x O.D.	4 x O.D.	6 x O.D	8 x O.D.	10 x O.D.
Elongation, (%)	D638 D412	450	400	350	300	300	750	550	600	200
Flame Resistance	D568	Self-ext.	Self-ext.	Self-ext.	Self-ext.	Self-ext.	Burns	Burns	Slow Burn	Slow Burn
Abrasion Resistance		Very Good	Very Good	Good	Very Good	Very Good	Fair	Excellent	Good	Excellent
Corrosion Resistance		Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent
Permeability** N_2 O_2 CO_2		0.5 – 2 1 – 6 10 – 35	0.5 – 2 1 – 6 10 – 35	0.5 – 2 1 – 6 10 – 35	20 60 135	18 65 150	2,765 7,960 20,130	0.3 – 5 1 – 10 4 – 25	20 60 280	4 25 90

*STERILIZATION GUIDELINES:

- Autoclaving (121°C, 15 psig for 20 minutes) – Clean and rinse item with distilled water before autoclaving. Certain chemicals which have no appreciable effect on resins at room temperature may cause deterioration at autoclaving temperatures unless removed with distilled water beforehand.
- Gas – ethylene oxide, formaldehyde. • Disinfectants – benzalkonium chloride, formalin, ethanol, etc. • Dry Heat – 170°C (338°F).
- Radiation – gamma irradiation at 2.5 Mrad with unstabilized plastic. For additional information, refer to the "Reference/Sterilizing" section of the current NALGENE Labware Catalog or contact Technical Service at Telephone: 1-800-625-4327 or Fax: 1-800-NALGENE, E-mail Technical.nalgene@thermofisher.com (Outside the US: Telephone: +1 585 899 7198; Fax: +1 585 899 7195). In Europe: Telephone: +44 01432.263933; Fax: +44 (0) 1432 376567 (UK).

**Permeability (approx.) – Units: $\left\{\frac{\text{cc} - \text{mm}}{\text{sec} - \text{cm}^2 - \text{cm Hg}}\right\} \times 10^{-10}$

†Except 180 PVC Vacuum Tubing

Note: Burial of tubing not recommended. Tubing should be encased in a pipe. For detailed physical and/or chemical properties information, contact Technical Support or visit our website at http://www.nalgenunc.com.

Tygon and PharMed are registered trademarks of Saint-Gobain Performance Plastics.

Not intended for medical or medical device use.
NALGENE 180 and 980 PVC Tubing contain DEHP [Bis (2-ethylhexyl)] phthalate, a commonly used plasticizer. It is known to the state of California Environmental Protection Agency that this chemical causes cancer or reproductive toxicity.

Chemical Resistance

Material	180	380	980	890	870	50/65	280	489	689
Acids–Weak	E	E	E	E	E	E	F	E	E
Acids–Strong	F	F	F	E	E	G	N	E	E
Alcohol–Aliphatic	G	G	G	E	E	G	N	E	E
Aldehydes	N	N	N	E	E	N	F	G	G
Bases–Weak	E	E	E	E	E	E	G	E	E
Bases–Strong	G	G	G	E	E	G	F	G	G
Esters	N	N	N	E	E	F	N	G	G
Hydrocarbons–Aliphatic	F	F	F	E	E	N	E	F	G
Hydrocarbons–Aromatic	N	N	N	E	E	N	N	F	F
Hydrocarbons–Halogenated	N	N	N	E	E	N	N	N	F
Ketones	N	N	N	E	E	N	N	G	G
Oxidizing Agents–Strong	F	F	F	E	E	G	N	F	F

Before using NALGENE® tubing with a particular chemical, it is strongly advised that you test it under your own conditions. If any doubt exists regarding a particular application, contact Technical Service.

E – 30 days of constant exposure causes no damage.
G – Little or no damage after 30 days of constant exposure to the reagent.
F – Some effect after 7 days of constant exposure to the reagent.
N – not recommended for continuous use.

Recommended Applications

Material	180	380	980	890	870	50/65	280	489	689
Dairy	X	X						X	
Food & Beverage	X	X				X		X	X
Machinery			X				X	X	X
Dental*	X	X	X						
Office Machines/Computers			X	X	X		X		
Refrigeration		X	X	X	X			X	
Transportation			X				X		
Environmental	X			X	X	X			
Instrumentation	X	X	X				X	X	X
Biotech/Pharmaceutical*	X	X		X	X	X			
Peristaltic Pumps	X	X				X			

*NALGENE tubing is not a medical device as defined by Class VI criteria set forth in the current US Pharmacopeoia, as amended.

Tolerances

Inches Diameter	180/380 Inside ± (in)	980 Inside ± (in)	280/290 Inside ± (in)	489/689 Outside ± (in)	870/890 Outside ± (in)	50/65 Inside ± (in)
1/16 and under 1/8	.003	—	.005	.007	.003	.005
1/8 and under 5/16	.008	.012	.009	.007	.003	.005
5/16 and under 1/2	.010	.012	.012	.007	.004	.008
1/2 and under 3/4	.010	.015	.018	.010	.005	.015
3/4 and under 1 1/8	.015	.015	.025	.015	_	.020
1 1/8 and under 1 3/4	.020	.020	.035	.020	_	_
1 3/4 and under 2 1/2	.031	.031	—	.035	—	—
Wall Thickness						
0 to 1/16	.003	—	.005	.006	.003	.005
1/16 to 1/8	.003	—	.006	.008	.003	.005
1/8 to 1/4	.005	—	.009	—	—	.008
1/4 to 3/8	.010	—	—	—	—	—
3/8 to 1/2	.015	—	—	—	—	—

Metric Diameter	180/380 Inside ± (mm)	980 Inside ± (mm)	280/290 Inside ± (mm)	489/689 Outside ± (mm)	870/890 Outside ± (mm)	50/65 Inside ± (mm)
1.6 and under 3.2	.08	—	.13	.18	.08	.13
3.2 and under 7.9	.13	.32	.24	.18	.08	.13
7.9 and under 12.7	.20	.32	.32	.18	.10	.21
12.7 and under 19.1	.26	.39	.48	.26	.13	.38
19.1 and under 28.4	.39	.39	.65	.39	_	.50
28.4 and under 44.5	.52	.52	.91	.52	_	_
44.5 and under 63.5	.79	.79	—	.91	—	—
63.5 and under 76.2	1.17	—	—	—	—	—
76.2 and under 101.6	1.58	—	—	—	—	—
Wall Thickness						
0 to 1.6	.08	—	.13	.16	.08	.13
1.6 to 3.2	.08	—	.16	.20	.08	.13
3.2 to 6.4	.13	—	.24	—	—	.21
6.4 to 9.5	.26	—	—	—	—	—
9.5 to 12.7	.39	—	—	—	—	—

Tubing Connectors

A

6460 Stopcocks, polypropylene; Teflon* TFE plug

Serrated tubulation on each end. Accepts 1/4-in. through 5/16-in. I.D. tubing. **Autoclavable**

Cat. No.6460	-0002	-0004
Bore, mm	2	4
No. per Pkg	1	1
No. per Case	6	6

*Or equivalent. Teflon is a registered trademark of DuPont.

A

6470 Three-Way Stopcocks, polypropylene; Teflon* TFE plug

Three tubulated outlets arranged in T shape; connect any two or all three arms of the stopcock. Accepts 1/4-in. through 5/16-in. tubing. Non-seizing, leakproof plug. **Autoclavable**

Cat. No.6470	-0002	-0004
Bore Size, mm	2	4
No. per Pkg	1	1
No. per Case	4	4

*Or equivalent. Teflon is a registered trademark of DuPont.

6120 Check Valve and Positive Connector, high-density polyethylene; silicone diaphragm

Useful for vacuum systems. Works best between 10- to 28-in. Hg. Prevents back pressure with aspirator-type vacuum pumps. Can be taken apart for cleaning. Available in one size with 3/4-in. long tubing connectors which fit 1/4-in. through 5/16-in. I.D. tubing. Not for use with liquids.

Cat. No.6120	-0010
No. per Pkg	6
No. per Case	72

6150 Quick Disconnects, high-density polyethylene

Tubulations slide together snugly with a twist; provide fast, smooth connections.

Cat. No.32-6150	-0010	-0020
Size	A	B
Length, Joined, in.	2-1/2	3-1/4
Tubulation, in.	3/4	1-1/16
Tubing I.D., in.	1/4 to 5/16	3/8 to 7/16
No. per Pkg	12	12
No. per Case	72	72

6151 T-Type Connectors, polypropylene Autoclavable

Cat. No.6151	-0125	-0187	-0250	-0312	-0375	-0500
To Fit Tubing with I.D., in.	1/8	3/16	1/4	5/16	3/8	1/2
No. per Pkg	12	12	12	12	12	12
No. per Case	72	72	72	72	48	48

A

6152 Y-Type Connectors, polypropylene Autoclavable

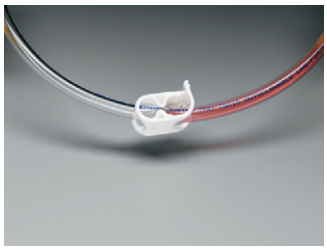
Cat. No.6152	-0125	-0187	-0250	-0312	-0375	-0500
To Fit Tubing with I.D., in.	1/8	3/16	1/4	5/16	3/8	1/2
No. per Pkg	12	12	12	12	12	12
No. per Case	72	72	72	72	48	48

A

6165 Pinch Clamp, polypropylene

Ideal for use with NALGENE laboratory tubing, such as Cat. Nos. 8000, 8001, 8007, 8030 and 8060. Allows precise, one-hand regulation of fluid flow, from completely open, to restricted flow, to completely closed. Plastic clamp won't rust, corrode or deform. Molded in one piece with no sharp edges.
Autoclavable

Cat. No.6165	-0002
To Fit Tubing with O.D.	1/4-in. to 7/16-in
No. per Pkg	12
No. per Case	72



A

DS6175 Quick-Disconnect Fitting, PP

Excellent for applications where tubing is frequently removed. Best used with flexible tubing.

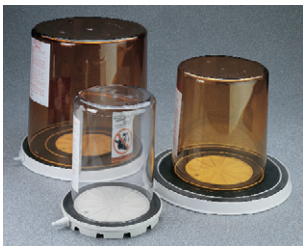
Cat. No.DS6175	-0060	-0120
Fits Tubing ID. x OD., in.	1/4 x 3/8	3/8 x 1/2
Fits Tubing ID. x OD., mm	6.4	9.5
No. per Pkg	2	–
No. per Case	2	2

6177 Valved Barbed Quick-Disconnect Fitting

Provides a leakproof connection, but may require clamps. **Leakproof**

Cat. No.6177	-0250	-0375
Fits Tubing I.D., in.	1/4	3/8
Fits Tubing I.D., mm	6.4	9.5
No. per Pkg	2	2
No. per Case	12	12

Vacuum Equipment



5305 Vacuum Chambers, polycarbonate or polyetherimide jar; white polypropylene or white polycarbonate plate

Vacuum chamber systems include a transparent jar and gasketed vacuum plate with a tubing adapter that fits 1/4-in. I.D. tubing. **Transparent**

Cat. No.5305	-0609	-0910	-1212
Jar Material	PC	PEI	PEI
Plate Material	PP	PC	PC
Brim Cap., L (approx.)	4.7	8.3	18.9
Brim Cap., gal. (approx.)	1-1/4	2-1/8	5
Jar O.D. x Ht., mm	170 x 237	222 x 253	305 x 304
Jar O.D. x Ht., in.	6-5/8 x 9-3/8	8-3/4 x 10	12 x 12
Plate O.D., mm	191	330	330
Plate O.D., in.	7-1/2	13	13
Gasket O.D., mm	178	321	321
Gasket O.D., in.	7	12-5/8	12-5/8
No. per Pkg	1	–	–
No. per Case	2	1	1

For replacement parts, see replacement parts Reference/Replacements Parts pages.

WARNING! Do not autoclave vacuum jars when used for vacuum service. Do not use with unsaturated halogenated hydrocarbons. Also, do not use Cat. No. 5305-0609 jar with other organic solvents, acids or bases.

5306 Vacuum Plates, white polypropylene or polycarbonate; neoprene gasket

For use with NALGENE jars (Cat. Nos. 5300 and DS5320) or with glass bell jars up to 12-1/2-in. in diameter. Supplied with 3/32-inch thick gaskets. Tubing adapter that fits 1/4-inch I.D. tubing is conveniently located on rim of plate. Replacement gaskets are available.*

Cat. No.5306	-0070	-0130
Material	White PP	White PC
Use with NALGENE Jars	5305-0609	DS5320-0910, DS5320-1212
O.D. x Thickness, mm	210 x 27	343 x 27
O.D. x Thickness, in.	8-5/16 x 1-1/16	13-1/2 x 1-1/16
No. per Pkg	1	1
No. per Case	6	4

*For replacement parts, see Reference/Replacement Parts pages.

DS5320 Vacuum Jars, polyetherimide

Identical to jars included with Cat. Nos. 5305-0910 and 5305-1212. These chemically-resistant jars have an amber cast and may be useful for demanding service. **Transparent**

Cat. No.DS5320	-0910	-1212
Jar O.D. x Ht., mm	222 x 254	305 x 305
Jar O.D. x Ht., in.	8-3/4 x 10	12 x 12
No. per Case	1	1

WARNING! Do not autoclave vacuum jars when used for vacuum service. Do not use with unsaturated halogenated hydrocarbons. Also, do not use Cat. No. 5305-0609 jar with other organic solvents, acids or bases.

6131 Repairable Hand-Operated Vacuum Pumps, polyvinyl chloride body

New handle design makes these pumps more durable. They quickly attain and hold vacuum of 25 in. (635 mm) Hg. Vacuum trigger release requires only one hand to operate and releases vacuum with the touch of an index finger. Adjustable vacuum release rate.

Smaller size (Cat. No. 6131-0010) has pumping rate of 15 cc/stroke and 3 psig (.21 bar) positive pressure at the exhaust port. Larger size (Cat. No. 6131-0020) has rate of 36 cc/stroke and 7 psig (.48 bar) positive pressure at the exhaust port. Full blank port pressure is obtained with only two strokes. Removable cover on exhaust port and trigger to release vacuum without disconnecting pumps from the line. Without vacuum gauge. Adjustable vacuum release rate controlled by trigger on pump. This economy version is ideal for field or lab use. Nozzle fits standard 1/4-in. I.D. tubing. Supplied with two-ft. length of Clear Plastic Tubing.

Cat. No.6131	-0010	-0020
No. per Pkg	1	1
No. per Case	4	4

6132 Repairable Hand-Operated Vacuum Pumps with Vacuum Gauge, polyvinyl chloride body

New handle design makes these pumps more durable. They quickly attain and hold vacuum of 25 in. (635 mm) Hg. Vacuum trigger release requires only one hand to operate and releases vacuum with the touch of an index finger. Adjustable vacuum release rate.

Smaller size (Cat. No. 6132-0010) has pumping rate of 15 cc/stroke and 7 psig (.48 bar) positive pressure at the exhaust port. Larger size (Cat. No. 6132-0020) has rate of 36 cc/stroke and 12 psig (.84 bar) positive pressure at the exhaust port. Full blank port pressure is obtained with only two strokes. Removable cover on exhaust port and trigger to release vacuum without disconnecting pumps from the line. Can be disassembled for repair or replacement of internal parts. See Cat. No. 6132-1000 for repair kit. Nozzle fits standard 1/4-in. I.D. tubing. Supplied with two-ft. length of Clear Plastic Tubing.

Cat. No.6132	-0010	-0020
No. per Pkg	1	1
No. per Case	4	4

6132 Repair Kit, polyvinyl chloride

Includes everything necessary to perform maintenance on NALGENE PVC repairable hand pumps (Cat. Nos. 6131 and 6132-0010, -0020).

Cat. No.6132	-1000
No. per Pkg	1
No. per Case	4

6133 Repairable Hand-Operated Vacuum Pump with Vacuum Gauge, zinc alloy

The durable pump easily and quickly attains and holds vacuum of 25 in. (635 mm) Hg. Vacuum trigger release requires only one hand to operate and releases vacuum with the touch of an index finger. Adjustable vacuum release rate. Has pumping rate of 15 cc/stroke and 15 psig (1.0 bar) positive pressure at the exhaust port. Full blank port pressure is obtained with only two strokes. Removable cover on exhaust port and trigger to release vacuum without disconnecting pumps from the line.

Made of zinc alloy for heavy-duty durability. Can be easily disassembled for repair or replacement of internal parts with repair kit (Cat. No. 6133-1000).

Cat. No.6133	-0010
No. per Pkg	1
No. per Case	4

6133 Repair Kit, zinc alloy

Includes everything necessary to perform maintenance or repair on NALGENE zinc alloy repairable hand pump (Cat. No. 6133-0010).

Cat. No.6133	-1000
No. per Pkg	1
No. per Case	4

6140 Vacuum Pump, Aspirator, polypropylene; polyethylene tubing

Attaches to faucet for maximum free air pumping capacity of 11.5 liters per minute at a water flow rate of 6.5 liters per minute. Operates efficiently with water pressures as low as 7.5 psig (.517 bar) for minimum water consumption. Ultimate vacuum: 28-1/2 in. (723.9 mm) Hg. Supplied with integral check valve, 3/8-in. NPT connecting thread, and 4-3/4-in. length of tubing for insertion in discharge end.

Cat. No.6140	-0010
No. per Pkg	1
No. per Case	24

For replacement parts, see Reference/Replacement pages.

Vials

6250 Sample Vials with Closure, linear low-density polyethylene

With friction-fit, snap closures. Useful for samples, pH cups, weighing vessels and packing applications. Will not shatter like polystyrene vials.

Cat. No.6250	-0005	-0012	-0018	-9028	-9050	-9075	-0160
Nom. Cap., ml	5	12	18	28	50	75	160
O.D. w/Closure, mm	23.6	27.1	27.1	27.1	37.3	37.3	53.6
Ht. With Closure, mm	24.9	35.6	52.6	84.6	70.9	107.3	100.0
No. per Pkg	12	12	12	12	12	12	12
No. per Case	144	144	144	144	144	144	144

Wash Bottles

Wash Bottle Selection Guide

NALGENE plastic wash bottles feature sturdy construction and come in more styles and more resins for more applications than any other wash bottles on the market. Whether you're disinfecting a counter top with a bleach solution, rinsing microscope slides or reusable labware, cleaning the probes on a pH meter, or performing other applications, there's a NALGENE wash bottle that will make the job easier. Selected bottles feature a non-metallic, self-venting closure to eliminate solvent drips. Look for the solvent wash bottles with new self-venting closure, Cat. Nos. 2421 and 2425. Don't forget to purchase the NALGENE Multi-bottle Rack, Cat. No. DS5996-0871. Ideal for safely carrying and transporting 500-ml wash bottles.

Selecting the Right Wash Bottle For The Job

LDPE – Low cost, soft and very squeezable with a good range of chemical resistance. Use with general purpose solutions like water, soap, dilute acids and dilute bases.

PP and PPCO – Soft and squeezable, specifically designed for repeated autoclaving. Good chemical resistance for use with general purpose solutions like saline and buffers that may require autoclaving.

Red LDPE – Good chemical resistance and color coding make these wash bottles ideal for alerting multiple users to potential safety cautions; also provides some light protection. Smaller I.D. tubing targets stream for cleaning and drying applications (Cat. Nos. DS2407, DS2408).

Fluorinated HDPE – Slightly stiffer bottle with very good chemical resistance and low permeability to many organic solvents. For short-term storage, this is a low cost alternative to Teflon* FEP.

Teflon FEP – Flexible Teflon FEP bottles feature excellent chemical resistance, low permeability and can be autoclaved.

Color coding is recommended to enhance visual recognition and labeling all bottles in accordance with federal, state and local regulations.

Resin	Chemical Resistance	Temperature °C	Autoclavability	Permeability (cc-ml/100 in^2 – 24 hr – atm) N_2	O_2	CO_2
LDPE	Good	–100 to + 80	No	180	500	2,700
PP/PPCO	Good	0 to +121	Yes	48	240	800
Red LDPE	Good	–100 to +80	No	180	500	2,700
Flourinated HDPE	Very Good	–100 to +120	No	42	185	580
Teflon FEP	Excellent	–270 to +205	Yes	320	750	2,200

*Teflon is a registered trademark of DuPont.

Wash Bottles

2401 Economy Wash Bottles, low-density polyethylene bottle; polypropylene screw closure/stem; polypropylene copolymer draw tube

Through-the-top wash bottle with closure and stem molded in one piece for leakproof service. Tip can be cut back to increase flow. Tight fit of draw tube and closure prevents separation. **Leakproof**

Cat. No.2401	-0125	-0250	-0500	-1000
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	24	24	28	38-430
No. per Pkg	6	6	6	4
No. per Case	48	36	24	12

2402 Wide-Mouth Unitary™ Wash Bottles, low-density polyethylene bottle/tubulation; polypropylene screw closure

Wide mouth for faster, easier filling. Bottle and tubulation molded in one piece. Closure is leakproof. Contents can be dispensed without tipping or shaking. Dispensing tip can be cut back to increase flow. **Leakproof**

Cat. No.2402	-0125	-0250	-0500	-0750	-1000
Cap., ml	125	250	500	750	1000
Cap., oz.	4	8	16	24	32
Closure Size, mm	24	38	38	38	43
No. per Pkg	6	4	4	4	2
No. per Case	48	36	24	24	12

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Teflon FEP

2403 Wash Bottles, Teflon* FEP bottle; Tefzel* ETFE screw closure/stem and draw tube

The most chemical-resistant NALGENE wash bottle, molded entirely of fluoropolymers. One-piece stem and closure for leakproof service. Provide contamination-free dispensing – useful for trace element work. Phthalate free. Safety Tip: After autoclaving adjust nozzle angle to <90° to ensure stream is pointing downward. **Autoclavable/Leakproof/Teflon FEP**

Cat. No.2403	-0125	-0250	-0500	-1000
Cap., ml	125	250	500	1000
Cap., oz.	4	8	16	32
Closure Size, mm	24	24	38-430	38-430
No. per Pkg	1	1	1	1
No. per Case	4	4	4	2

*Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

2400 Adjustable Teflon FEP Wash Bottles, FEP bottle, Tefzel ETFE closure, PTFE vent membrane, EPR O-ring, polypropylene hang tag

designed for safer handling of aggressive solvents, with strong acids, organic solvents and oxidizers/peroxides. Inherent safety features include easy open and close spout that adjusts stream size; when closed it minimizes dripping. Materials are low in extractables for high-purity use. PTFE membrane vents vapors to reduce pressure buildup inside the bottle. Write or affix labels to colorful polypropylene hang tags. 500-ml tag fits 1 1/2- x 2-in. labels and 1,000-ml tag fits 2- x 3-in. labels. Bottles withstand temperatures from -105C to 150C. Packaged individually. US Patent 6,837,400.

Autoclavable/Teflon FEP

- Easy Open and Close Spout
- Adjustable Stream
- PTFE Vent
- Hang Tag

Cat. No.2400	-0501	-0502	-0503	-0504	-1001	-1002	-1003	-1004
Cap., ml	500	500	500	500	1000	1000	1000	1000
Closure size, mm	53	53	53	53	53	53	53	53
Color	Blue	Red	Yellow	Green	Blue	Red	Yellow	Green
No. per Pkg	1	1	1	1	1	1	1	1
No. per Case	4	4	4	4	2	2	2	2

2400 Hang Tags for Adjustable Teflon FEP Wash Bottle, Polypropylene

Colorful polypropylene hang tags can be written on or accept labels. The 500 ml tags fits 1.5 x 2 in. labels and the 1000 ml tag fits 2 x 3 in. labels. In blue, red, yellow and green. Assortment packs contain three of each color.

Cat. No.2400	-0001	-0002
Tag size, in.	1.5 x 2	2 x 3
Fits Bottle Size, mm	53mm; 500ml	53mm; 1000ml
No. per Case	12	12

2407 Wide-Mouth Wash Bottles, low-density polyethylene bottle; polypropylene screw closure/stem; polypropylene copolymer draw tube

Wide-mouth design for easy filling. Through-the-top closure and stem molded in one piece. **Leakproof**

Cat. No.2407	-0500	-1000
Cap., ml	500	1000
Cap., oz.	16	32
Closure Size, mm	53	63
No. per Pkg	4	2
No. per Case	24	12

Wash Bottles

2422 Color-Coded Wash Bottles, low-density polyethylene bottle; polypropylene screw closure/stem and draw tube

Lets you color code reagents or coordinate with industry storage codes. Non-vented closure and stem molded in one piece for leakproof service. Tip can be cut back to increase flow.

Cat. No.2422	-2500	-3500	-4500	-5500
Cap., ml	500	500	500	500
Cap., oz.	16	16	16	16
Closure Size, mm	28	28	28	28
Color	Yellow	Blue	Green	Red
No. per Pkg	6	6	6	6
No. per Case	24	24	24	24

2423 Color-Coded Unitary™ Wash Bottle Assortment, low-density polyethylene bottle; polypropylene screw closure

Convenient, pre-packaged color-coded Unitary Wash Bottle Assortment. Each pack contains four 500 ml Unitary Style Wash Bottles, with four different color closures: red, blue, white and yellow. Each package contains a sample of Cat. No. 6316 PolyPaper Right-To-Know Custom Labeling System with mylar overlay. **Leakproof**

Cat. No.2423	-0500
Cap., ml	500
Cap., oz.	16
Closure Size, mm	38; 415
No. per Pkg	4
No. per Case	16

Vented closures available separately see replacement parts list.

DS2404 Safety Wash Bottles, red low-density polyethylene bottle; red polypropylene screw closure; low-density polyethylene delivery tube

Instantly recognizable. Bottles offer dripless and contamination-free delivery tube (delivery tube is separate from closure.) **Leakproof**

Cat. No.DS2404	-0250	-0500
Cap., ml	250	500
Cap., oz.	8	16
Closure Size, mm	24	24
No. per Case	4	4

DS2408 Unitary™ Safety Wash Bottles, red low-density polyethylene bottles/tubulation; polypropylene screw closures

Design features a wide mouth for safe, fast filling. Molded in one piece – no delivery tube to drip when filling - no contamination of bottle contents by delivery. **Leakproof**

Cat. No.DS2408	-0250	-0500
Cap., ml	250	500
Cap., oz.	8	16
Closure Size, mm	38	38
No. per Case	4	4

6316 PolyPaper Right-To-Know Custom Labeling System

Create labels that identify the chemical and its properties. Refer to the appropriate Material Safety Data Sheet (MSDS) or other reference material to verify the correct codes. Overlay is provided to protect the label from chemicals. Consists of pressure-sensitive stickers and blank labels. Complete instructions included with each package.

Cat. No.6316	-1000
No. per Pkg	25
No. per Case	150

2405 Autoclavable Wash Bottles, polypropylene copolymer bottle; polypropylene screw closure/stem and draw tube

Flexible, contact-clear. Printed with "Autoclavable", "NALGENE", catalog number, and size code.

Autoclavable/Leakproof

Cat. No.2405	-0500	-1000
Cap., ml	500	1000
Cap., oz.	16	32
Closure Size, mm	28	38-430
No. per Pkg	6	4
No. per Case	24	12

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2421 Fluorinated Solvent Wash Bottles, fluorinated high-density polyethylene; red fluorinated polypropylene closure/stem; polypropylene draw tube

Self-venting. Non-metallic vent keeps solvent in bottle. No risk of solvent leakage. Offers low permeability and excellent chemical resistance to many organic solvents. Useful over a temperature range from 0°C to 90°C. "Solvent Wash Bottle" silk-screened in red. Fluorinated HDPE reduces the risk of absorption of the solvent into the bottle itself. **Leakproof**

Cat. No.2421	-0250	-0500
Cap., ml	250	500
Cap., oz.	8	16
Closure Size, mm	24	53
No. per Pkg	2	2
No. per Case	36	24

Chemical Safety Products

Choose from a wide range of products specially designed for dispensing, labeling, disposing of hazardous waste, transporting and carrying chemical bottles. Cat. Nos. 2425 and 2436 comply with this U.S. OSHA Hazard Communication Standard, 29 CFR Part 1910.1200 (f) (4).*

The Anatomy of NALGENE® Right-To-Know safety products

NALGENE Right-To-Know safety products help your laboratory meet regulatory requirements for labeling chemical containers in the workplace. These symbols have been devised to provide instantly recognizable, standard symbols for the care, handling and storage of commonly-used laboratory chemicals. NALGENE Right-To-Know bottles and labeling incorporate the standard U.S. Department of Transportation (DOT), National Fire Protection Association (NFPA) and International Chemical Society (ICS) formulas. They also comply with U.S. Occupational Safety and Health Administration (OSHA) Hazardous Communication standards. Bottles are break-resistant, flexible, translucent and guaranteed leakproof. Labels are waterproof, chemical resistant and adhere well to plastic, glass and metal.

Chemical Name and Symbol
Chemical name in bold print (generic name in parentheses), followed by the ICS formula.

NFPA Diamond
Uses the standard NFPA codes, ranking hazards according to the chemical's reaction to the presence of fire. The red, blue and yellow diamonds use a rating scale of 4 to 0, with 4 representing the greatest hazard and 0 the least. The bottom diamond uses pictograms.

TOP DIAMOND
Red: Flash Point
4 - Below 70°F/21°C
3 - Below 100°F/38°C
2 - Below 200°F/93°C
1 - Above 200°F/93°C
0 - Non-flammable

RIGHT-HAND DIAMOND
Yellow: Reactivity
4 - Explosive
3 - Shock and heat may detonate
2 - Violent change may occur
1 - Unstable if heated
0 - Normally stable

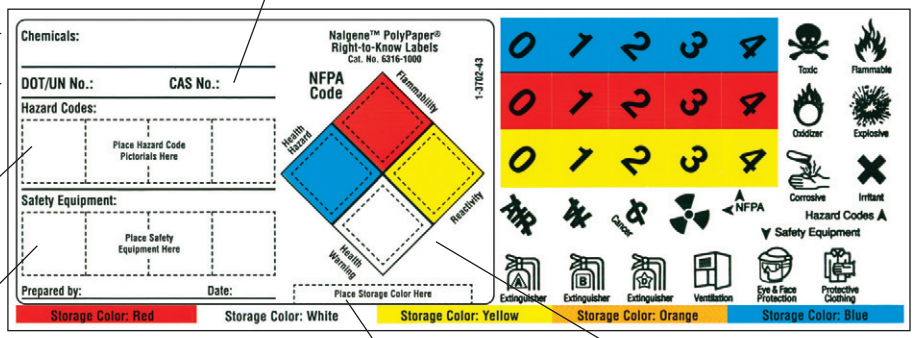
LEFT-HAND DIAMOND
Blue: Health Hazard
4 - Deadly
3 - Extremely dangerous
2 - Hazardous
1 - Slightly hazardous
0 - Normal material

BOTTOM DIAMOND
White: Health Warnings
Air-reactive
Water-reactive
Carcinogenic
Radioactive

Hazard Code
Primary hazards represented by appropriate DOT pictogram

CAS Number
Chemical Abstract Service Number

DOT/UN Number
Four-digit number, preceded by UN or NA (North America), used to identify particular materials and regulate their transportation. These four-digit numbers are called product identification numbers (PINs) under Canadian Transportation and Dangerous Goods Regulations.



Hazard Code
(See description above)

Safety Equipment
Required protective equipment represented by the appropriate pictogram, including fire extinguishers:

Extinguisher A - general use
Extinguisher B - flammable liquids
Extinguisher D - flammable materials

Storage Color
Color indicates the appropriate storage area:

RED - flammable
BLUE - health hazard
YELLOW - reactive
WHITE - contact hazard (corrosive)
ORANGE - general storage

NFPA Diamond
(See description above)

2436 Vented Unitary™ Safety Wash Bottles, LDPE bottle; PP or HDPE closure; PTFE membrane

Unique vent system keeps hazardous volatile liquids in the wash bottles and off the lab bench. A strong, steady stream of liquid is dispensed when the wash bottle is squeezed. Choose from 6 different chemicals: acetone, methanol, isopropanol, ethyl alcohol, sodium hypochlorite (bleach) and distilled water. White closure for sodium hypochlorite (bleach) is HDPE.

Unitary bottle design prevents contamination when filling the bottle; no draw tube assembly to pick-up contamination off the lab bench. To prevent cross-contamination, each bottle has a color bar, below the chemical name, which corresponds to the colored closure. Bottles come with vented 38mm closure:

Leakproof

Cat. No.	Cap., ml	Cap., oz.	Chemical	Closure Color	No. per Pkg	No. per Case
2436-0251	250	8	Acetone	Red	4	36
2436-0252	250	8	Ethyl Alcohol	White	4	36
2436-0253	250	8	Methanol	Green	4	36
2436-0254	250	8	Isopropanol	Yellow	4	36
2436-0255	250	8	Distilled Water	Natural	4	36
2436-0256	250	8	Sodium Hypochlorite (bleach)	White	4	36
2436-0501	500	16	Acetone	Red	4	24
2436-0502	500	16	Ethyl Alcohol	White	4	24
2436-0503	500	16	Methanol	Green	4	24
2436-0504	500	16	Isopropanol	Yellow	4	24
2436-0505	500	16	Distilled Water	Natural	4	24
2436-0506	500	16	Sodium Hypochlorite (bleach)	White	4	24
2436-1001	1000	32	Acetone	Red	2	12
2436-1002	1000	32	Ethyl Alcohol	White	2	12
2436-1003	1000	32	Methanol	Green	2	12
2436-1004	1000	32	Isopropanol	Yellow	2	12
2436-1005	1000	32	Distilled Water	Natural	2	12
2436-1006	1000	32	Sodium Hypochlorite (bleach)	White	2	12

2425 Right-To-Know Safety Wash Bottles, LDPE, white LDPE or PPCO bottle; PP or HDPE closure; PPCO fill tube

Self-venting. Non-metallic vent keeps contents in bottle. No risk of solvent leakage. Feature chemical name, International Chemical Society (ICS) chemical formula and Chemical Abstract Service (CAS) number. Bottle assortment includes all chemicals except sodium hypochlorite. To prevent cross-contamination, each bottle has a color bar which corresponds to its colored closure. **Leakproof**

Cat. No.	Cap., ml	Cap., oz.	Closure Size, mm	Chemical	Color	No. per Pkg	No. per Case
2425-0501	500		28	Acetone†	RED*	6	24
2425-0502	500		28	Ethyl Alcohol	WHITE*	6	24
2425-1002	1000		38-430	Ethyl Alcohol	WHITE*	4	12
2425-0503	500		28	Methanol	GREEN*	6	24
2425-1003	1000		38-430	Methanol	GREEN*	4	12
2425-0504	500		28	Isopropanol	YELLOW*	6	24
2425-1004	1000		38-430	Isopropanol	YELLOW*	4	12
2425-0505	500		28	Distilled water	NATURAL*	6	24
2425-1005	1000		38-430	Distilled water	NATURAL*	4	12
2425-0506	500		28	Sodium Hypochlorite‡	WHITE*	6	24
2425-1006	1000		38-430	Sodium Hypochlorite‡	WHITE*	4	12
2425-0500	500		28	Bottle assortment	—*	5	20

†Bottle is molded of LDPE with PP closure for greater chemical resistance.

*Closure color.

‡Bottle is molded of white LDPE with HDPE closure, for light-protective barrier qualities between 280 nm and 450 nm.

Reference, Tech

How to Order

Orders filled for package quantity only except for items at the end of the Replacement Parts List. Use the complete Replacement Part Number when ordering. Prices subject to change without notice. Call 1-800-625-4327 for further details.

NALGENE® Labware Products

For use with Cat. No.	Replacement Description	Part No.	Pkg. Qty.
315-1047	Gasket	71-0320-0001	4
1000-0010	Settlometer Jar with Cover, PC	71-1000-0001	25
1010-0507	Jar for Settlometer Kit, PC	71-1010-9507	1
DS2153-0700	Fluid-Transfer Closure, PP	71-2153-0700	6
2162-0531	Gasket, sealing, TPE, 53 mm	71-2160-0053	12
2162-0830	Gasket for 83B Filling/Venting Closure	71-2162-1830	5
2162-0830	Tubing Clamp for 83B Filling/Venting Closure, ACL	71-2162-1010	4
2162-0830	Port Caps for 83B Filling/Venting Closure, TPE	71-2162-1020	6
2227-0020	Closure, with Silicone Grommet	71-2227-1020	1
DS2227-0020	Magnetic Culture Vessel Body, PC	71-2605-0001	1
DS2227-0020	Magnetic Culture Vessel Stirrer Assembly	71-2605-0002	1
DS2227-0020	Magnetic Culture Vessel Closure & Grommet	71-2605-0003	1
2240-All Sizes	53-mm Cap/Strap for Jerrican	71-2240-1053	10
2401-0500	Closure, Stem and Draw Tube, 28 mm	71-2401-0001	25
2401-0125	Closure, Stem and Draw Tube, 24 mm	71-2401-0002	25
2401-0250	Closure, Stem and Draw Tube, 24 mm	71-2401-0002	25
2401-1000	Closure, Stem and Draw Tube, 38-430	71-2401-0003	25
2402-All Sizes	Tip for Wash Bottle, LDPE	71-2402-1010	100
2402-0500	Closure, PP; Natural	71-2402-0500	10
2403-0125	Closure/Stem and Draw Tube, 24-415	71-2403-0001	2
2403-0250	Closure/Stem and Draw Tube, 24-415	71-2403-0002	2
2403-0500	Closure/Stem and Draw Tube, 38-430	71-2403-0003	2
2403-1000	Closure/Stem and Draw Tube, 38-430	71-2403-0004	2
2407-0500	Closure/Stem and Draw Tube, 53 mm	71-2407-0001	25
2407-1000	Closure/Stem and Draw Tube, 63 mm	71-2407-0002	25
2410-All Sizes	Blue Spout Tip for Dropping Bottle	71-2410-1010	100
2411-0015, -0030, -0060	Clsr/Spout Cap for Drop-Disp. Btl, 20 mm	71-2411-1030	25
2411-0125, -0250	Clsr/Spout Cap for Drop-Disp. Btl, 24 mm	71-2411-1125	25
DS2420- Both Sizes	Closure/Spout Cap for Dispensing Bottle	71-2420-1010	25
2422-2500	Closure/Stem Assembly, Yellow	71-2422-2500	25
2422-3500	Closure/Stem Assembly, Blue	71-2422-3500	25
2422-4500	Closure/Stem Assembly, Green	71-2422-4500	25
2422-5500	Closure/Stem Assembly, Red	71-2422-5500	25
2423-0500	Closure, PP; Blue	71-2423-0500	10
2423-0500	Closure, PP; Red	71-2423-0501	10
2423-0500	Closure, PP; White	71-2423-0502	10
2423-0500	Closure, PP; Green	71-2423-0503	10
2423-0500	Closure, PP; Yellow	71-2423-0504	10
2423-0500	Vented Closure, PP; Blue	71-2436-0500	10
2425-0501	Closure/Stem Assembly, Red	71-2425-0501	25
2425-0502	Closure/Stem Assembly, White	71-2425-0502	25
2425-0503	Closure/Stem Assembly, Green	71-2425-0503	25
2425-0504	Closure/Stem Assembly, Yellow	71-2425-0504	25
2425-1001	Closure/Stem Assembly, Red	71-2425-1001	25
2425-1002	Closure/Stem Assembly, White	71-2425-1002	25
2425-1003	Closure/Stem Assembly, Green	71-2425-1003	25
2425-1004	Closure/Stem Assembly, Yellow	71-2425-1004	25
2425-1004	Closure/Stem Assembly, Blue	71-2405-1000	25
2436-0251, -0501, -1001	Red Vented Closure	71-2436-0501	10
2436-0252, -0502, -1002	White Vented Closure	71-2436-0502	10
2436-0253, -0503, -1003	Green Vented Closure	71-2436-0503	10
2436-0254, -0504, -1004	Yellow Vented Closure	71-2436-0504	10
2436-0255, -0505, -1005	Clear Vented Closure	71-2436-0505	10
2605-0001	Magnetic Culture Vessel Body	71-2605-0001	1
2605-0001	Magnetic Culture Vessel Stirring Assembly	71-2605-0002	1
2605-0001	Magnetic Culture Vessel Closure and Grommet	71-2605-0003	1
2654 Series	Tang Replacement Kit	71-2654-0001	1
2654 Series	Flange Replacement Kit	71-2654-0002	2
2654 Series	Bearing House Replacement Kit	71-2654-0003	1
2675-0150	Silicone Plug for BioProcess Vessel Bottom Drain Valve	71-2675-0001	1
3132-0013	O-Rings for NALGENE Sealing Cap	71-3132-0013	10
3132-0015	O-Rings for NALGENE Sealing Cap	71-3132-0015	10
3132-0020	O-Rings for NALGENE Sealing Cap	71-3132-0020	10
3132-0024	O-Rings for NALGENE Sealing Cap	71-3132-0024	10
3132-0058	O-Rings for NALGENE Sealing Cap	71-3132-0058	10
3132-0063	O-Rings for NALGENE Sealing Cap	71-3132-0063	10
DS3132-0020	20-mm Gasket for NALGENE Sealing Cap	71-3132-0020	10
DS3132-0024	24-mm Gasket for NALGENE Sealing Cap	71-3132-0024	10
DS3132-0058	58-mm Gasket for NALGENE Sealing Cap	71-3132-0058	10
DS3132-0063	63-mm Gasket for NALGENE Sealing Cap	71-3132-0063	10
3435-0016	Plug/O-Ring for NALGENE Sealing Cap	71-3430-0016	10
3435-0025	Plug/O-Ring for NALGENE Sealing Cap	71-3430-0025	10
3435-0038	Plug/O-Ring for NALGENE Sealing Cap	71-3430-0038	10
3640-0025	Stopcock Assembly for Buret	71-3650-1025	2
3640-0050	Stopcock Assembly for Buret	71-3650-1050	2
3640-0100	Stopcock Assembly for Buret	71-3650-1000	2
3650-0025	Stopcock Assembly for Acrylic Buret	71-3650-1025	2
3650-0050	Stopcock Assembly for Acrylic Buret	71-3650-1050	2
3650-0100	Stopcock Assembly for Acrylic Buret	71-3650-1000	2
3650-0025	Acrylic Buret Body	71-3650-1225	2
3650-0050	Acrylic Buret Body	71-3650-1250	2
3650-0100	Acrylic Buret Body	71-3650-1200	2

For use with Cat. No.	Replacement Description	Part No.	Pkg. Qty.
4150-1000	Cover for Dewar Flask, HDPE	71-4150-1010	5
4150-2000	Cover for Dewar Flask, HDPE	71-4150-1020	5
4150-4000	Cover for Dewar Flask, HDPE	71-4150-1040	5
4150-9000	Cover for Dewar Flask, HDPE	71-4150-1090	5
4300-All Sizes	Tip for Separatory Funnel, FEP	71-4301-1010	5
4300-All Sizes	Stopcock Assembly for Separatory Funnel, TFE	71-4301-1025	1
4301-All Sizes	Tip for Separatory Funnel, FEP	71-4301-1010	5
4301-0125	Stopcock Assembly for Separatory Funnel, TFE	71-4301-1025	1
4301-0250	Stopcock Assembly for Separatory Funnel, TFE	71-4301-1025	1
4301-0500	Stopcock Assembly for Separatory Funnel, TFE	71-4301-1025	1
4301-1000	Stopcock Assembly for Separatory Funnel, TFE	71-4301-1025	1
4301-2000	Stopcock Assembly for Separatory Funnel, TFE	71-4301-1050	1
5115-All Sizes	Tube Insert for Labtop Cooler	71-5115-0001	16
DS5240-0060	90° Elbow for Rinser	71-5240-1010	5
5245-Both Sizes	Tubing Sets for Washer/Rinser Set	71-5245-1010	5
DS5300-0507	Covers for Multi-Purpose Jar, PC	71-5301-0005	4
5305 - All Sizes	Neoprene Gasket Redesign Kit	71-5306-1011	1
5305-0910	Neoprene Gasket Kit for Vacuum Jar, 8-, 11- & 12-in. Gaskets	71-5306-1011	1
5305-1212	Neoprene Gasket Kit for Vacuum Jar, 8-, 11- & 12-in. Gaskets	71-5306-1011	1
5306-0130	Neoprene Gasket Kit for Vacuum Jar, 8-, 11- & 12-in. Gaskets	71-5306-1011	1
5306-0070	Neoprene Gasket	71-5306-1007	2
5306-0130	Neoprene Gasket	71-5306-1013	2
5309-0250	Desiccator Top, PC	71-5311-0250	2
5310-0250	Desiccator Top, PC	71-5311-0250	2
5311-0250	Stopcock Assembly for Desiccator Top, PP	71-5311-0010	1
5311-0250	O-Ring for Desiccator	71-5311-0020	1
5311-0250	Kit of 8 TPE Caps (natural) for Desiccator Top, PC	71-0300-0005	1
5317 - All Sizes	Desiccator Cabinet Shelve PMMA	71-5317-1001	1
5705-All Sizes	Staining Box Plug	71-5705-0001	12
5920-0060	Post for Petri Dish Rack, PC	71-5920-0650	4
5921-0060	Post for Petri Dish Rack, PC	71-5920-0650	4
5922-0024	Post for Petri Dish Rack, PC	71-5920-0850	4
5924-0020	Post for Petri Dish Rack, PC	71-5920-0850	4
6140-0010	Sidearm Adapter for Aspirator Vacuum Pump	71-6140-1010	25
6140-0010	Extension Tube for Aspirator Vacuum Pump	71-6140-1020	25
6355-0001	Face Shield Replacement Window	71-6355-0001	2
6422-0010	Tubing Adapter for Spigot, HDPE	71-6422-1010	6
6740-1108	Foam Insert for Beta Storage Box	71-6740-0001	1
6920-0060	Cover for Waste Container, PP	71-6920-1060	2
6920-0120	Cover for Waste Container, PP	71-6920-1130	2
7135-0001	Latch Assemblies, Violet PEI	71-7135-0001	4

NALGENE Filterware

DS0300-Series	Kit of 2 Sterilization Plates (clear), 2 O-Rings (1.6-in. I.D.)	71-0300-0003	1
DS0300-Series	Kit of 8 Caps (natural), 1 Tubing Adapter (white)	71-0300-0005	1
DS0300-Series	Kit of 2 Tubing Adapters (white)	71-0300-0006	2
DS0300-4000	Kit of 4 O-Rings (1.6-in. I.D.), 2 Gaskets	71-0300-0001	1
DS0300-4000	Kit of 2 Analytical Plates (white), 2 O-Rings (1.6-in. I.D.)	71-0300-0002	1
DS0300-4050	Kit of 2 Analytical Plates (white), 2 O-Rings (1.6-in. I.D.)	71-0300-0002	1
DS0300-4050	Kit of O-Rings: 4 - 1/6.-in. I.D., 2 - 4.2-in. I.D.	71-0300-0004	1
DS0300-4100	Kit of O-Rings: 4 - 1/6.-in. I.D., 2 - 4.2-in. I.D.	71-0300-0004	1
DS0300-4100	Kit of 2 Analytical Plates (white), 2 O-Rings (1.6-in. I.D.)	71-0300-0002	1
DS0310-Series	Kit of 2 Sterilization Plates (clear), 2 O-Rings (1.6-in. I.D.)	71-0300-0003	1
DS0310-Series	Kit of 8 Caps (natural), 1 Tubing Adapter (white)	71-0300-0005	1
DS0310-Series	Kit of 2 Tubing Adapters (white)	71-0300-0006	2
DS0310-4000	Kit of 4 O-Rings (1.6-in. I.D.), 2 Gaskets	71-0300-0001	1
DS0310-4000	Kit of 2 Analytical Plates (white), 2 O-Rings (1.6-in. I.D.)	71-0300-0002	1
DS0310-4050	Kit of 2 Analytical Plates (white), 2 O-Rings (1.5-in. I.D.)	71-0300-0002	1
DS0310-4050	Kit of O-Rings: 4 - 1/6.-in. I.D., 2 - 4.2-in. I.D.	71-0300-0004	1
DS0315-0047	Upper Reservoir w/Gasket	71-0315-0001	1
DS0315-0047	Lower Stem w/Support Plate	71-0315-0002	1
DS0315-0047	Cover w/3 TPE Caps	71-0315-0003	3
DS0315-0047	6 Gaskets	71-0315-0004	6
DS0315-0047	Gasket	71-0320-0001	4
DS0320-Series	Kit of 2 Sterilization Plates (clear), 2 O-Rings (1.6-in. I.D.)	71-0300-0003	1
DS0320-Series	Kit of 8 Caps (natural), 1 Tubing Adapter (white)	71-0300-0005	1
DS0320-Series	Kit of 2 Tubing Adapters (white)	71-0300-0006	2
DS0320-2533	Kit of 4 O-Rings (1.6-in. I.D.), 2 Gaskets	71-0300-0001	1
DS0320-2533	Kit of 4 Bottle-Top Gaskets (1.18-in. O.D.)	71-0320-0033	5
DS0320-2545	Kit of 4 O-Rings (1.6-in. I.D.), 2 Gaskets	71-0300-0001	1
DS0320-2545	Kit of 4 Bottle-Top Gaskets (1.67-in. O.D.)	71-0320-0045	5
DS0320-5033	Kit of O-Rings: 4 - 1/6.-in. I.D., 2 - 4.2-in. I.D.	71-0300-0004	1
DS0320-5033	Kit of 4 Bottle-Top Gaskets (1.18-in. O.D.)	71-0320-0033	5
DS0320-5045	Kit of O-Rings: 4 - 1/6.-in. I.D., 2 - 4.2-in. I.D.	71-0300-0004	1
DS0320-5045	Kit of 4 Bottle-Top Gaskets (1.67-in. O.D.)	71-0320-0045	5
DS0330-Series	Kit of 3 O-Rings	71-0330-0001	3
DS0330-Series	Set of 2 Leur Fittings	71-0330-0002	2
DS0330-Series	Tubing Adapters	71-0330-0003	2
DS0345-0001	Filter Manifold Stopcock	71-0345-0010	1

Replacement Closures for NALGENE® Bottles and Carboys

Refer to the Bottle Chart in this catalog to determine which closure fits your specific bottle.

Bottle Neck Size	Description	Replacement Part No.	Pkg. Qty.
13 mm	Imhoff Cone Closure	71-1000-0001	25
13 mm	Screw Closure, PP	71-2150-0130	12
13 mm	Amber Screw Closure, Amber PP	71-2171-0130	12
13 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0130	2
20 mm	Screw Closure, PP	71-2150-0200	12
20 mm	Screw Closure, HDPE	71-2151-0200	12
20 mm	Screw Closure, Amber PP	71-2171-0200	12
20 mm	Screw Closure, Teflon PFA*	71-2172-0020	2
20 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0200	2
20 mm	Closure, Stem & Draw Tube	71-2401-0001	25
24 mm	Screw Closure, PP	71-2150-0240	12
24 mm	Screw Closure, HDPE	71-2151-0240	12
24 mm	Screw Closure, Amber PP	71-2171-0240	12
24 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0240	2
24 mm	Closure, Stem & Draw Tube	71-2401-0002	25
24 mm	Teflon Wash Bottle Replacement Closure	71-2403-0001	2
24 mm	Teflon Wash Bottle Replacement Closure	71-2403-0002	2
28 mm	Screw Closure, PP	71-2150-0280	12
28 mm	Screw Closure, HDPE	71-2151-0280	12
28 mm	Screw Closure, Amber PP	71-2171-0280	12
28 mm	Screw Closure, Black Tefzel ETFE*	71-2173-0280	2
28 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0280	2
33 mm	Screw Closure, PP	71-2150-0330	12
33 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0330	2
38 mm	Screw Closure, PP	71-2150-0380	12
38 mm	Screw Closure, HDPE	71-2151-0380	12
38 mm	Screw Closure, Amber PP	71-2171-0380	12
38 mm	Screw Closure, Black Tefzel ETFE*	71-2173-0380	2
38 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0380	2
38 mm	Closure, PP; Natural	71-2402-0500	10
38-415	Closure, PP; Blue	71-2423-0500	10
38-415	Closure PP; Red	71-2423-0501	10
38-415	Closure, PP; White	71-2423-0502	10
38-415	Closure, PP; Green	71-2423-0503	10
38-415	Closure, PP; Yellow	71-2423-0504	10
38-415	Vented Closure, PP; Blue	71-2436-0500	10
38-415	Vented Closure, PP; Red	71-2436-0501	10
38-415	Vented Closure, PP; White	71-2436-0502	10
38-415	Vented Closure, PP; Green	71-2436-0503	10
38-415	Vented Closure, PP; Yellow	71-2436-0504	10
38-415	Vented Closure, PP; Natural	71-2436-0505	10
38-430	Screw Closure, HDPE	71-2151-0384	12
38-430	Screw Closure, PP	71-2160-0384	12
38-430	Screw Closure, Amber PP	71-2171-0384	12
38-430	Screw Closure, Teflon PFA*	71-2172-0384	2
38-430	Screw Closure, Natural Tefzel ETFE*	71-2174-0384	2
38-430	Closure, Stem & Draw Tube	71-2401-0003	25
38-430	Teflon Wash Bottle Replacement Closure	71-2403-0003	2
38-430	Teflon Wash Bottle Replacement Closure	71-2403-0004	2
43 mm	Screw Closure, PP	71-2150-0430	12
43 mm	Screw Closure, Amber PP	71-2171-0430	12
43 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0430	2
48 mm	Screw Closure, PP	71-2150-0480	12
48 mm	Screw Closure, Amber PP	71-2171-0480	12
48 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0480	2
53B	Screw Closure, White HDPE w/TPE gasket	71-2151-0053	12
53B	Screw Closure, White PP	71-2160-0530	12
53B	Screw Closure, Amber PP	71-2171-0530	12
53 mm	Screw Closure, Natural PP	71-2150-0530	12
53 mm	Screw Closure, Natural Tefzel ETFE*	71-2174-0530	2
53 mm	Closure Stem, Draw Tube Assembly, PP	71-2407-0001	25
53 mm	Sealing gasket for 53B closure	71-2160-0053	12
63 mm	Closure Stem, Draw Tube Assembly, PP	71-2407-0002	25
63 mm	Screw Closure, Amber PP	71-2171-0630	12
63 mm	Screw Closure, PP	71-2150-0630	12
70mm	Screw Closure, HDPE	71-2151-0070	2
70mm	Mason Jar Closure, White PP	71-2154-0700	12
83B	Screw Closure, HDPE	71-2151-0083	2
83B	Screw Closure, PP	71-2160-0830	2
100mm	Screw Closure, PP	71-2150-1000	12
120mm	Large Jar Closure, White PP	71-2155-1200	12

* or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

Resins - Reference

Polyolefins

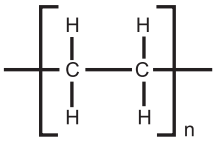
Polyolefins are high-molecular-weight hydrocarbons. They include: low-density, linear low-density and high-density polyethylene; polypropylene copolymer; polypropylene, and polymethylpentene. All are nontoxic and non-contaminating and exhibit varying degrees of break resistance. These are the only plastics lighter than water. They easily withstand exposure to nearly all chemicals at room temperature for up to 24 hours. Strong oxidizing agents eventually cause embrittlement. All polyolefins can be damaged by long exposure to ultraviolet light.

Polyethylene The polymerization of ethylene results in an essentially straight-chain, high molecular-weight hydrocarbon. The polyethylenes are classified according to the relative degree of branching (side chain formation) in their molecular structures, which can be controlled with selective catalysts.

Like other polyolefins, the polyethylenes are chemically inert. Strong oxidizing agents will eventually cause oxidation and embrittlement. They have no known solvent at room temperature. Aggressive solvents will cause softening or swelling, but these effects are normally reversible.

Low-density polyethylene (LDPE) has more extensive branching, resulting in a less compact molecular structure.

High-density polyethylene (HDPE) has minimal branching, which makes it more rigid and less permeable than LDPE.

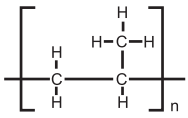


HIGH-DENSITY POLYETHYLENE

Linear low-density polyethylene (LLDPE) combines the toughness of low-density polyethylene with the rigidity of high-density polyethylene.

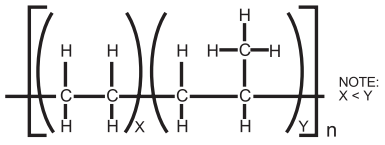
Cross-linked high-density polyethylene (XLPE) is a form of high-density polyethylene wherein the individual molecular chains are bonded to each other (using heat, plus chemicals or radiation) to form a three-dimensional polymer of extremely high molecular weight. This structure provides superior stress-crack resistance and somewhat improves the toughness, stiffness and chemical resistance of HDPE. XLPE is a superior material for molding very large storage tanks.

Polypropylene (PP) is similar to polyethylene, but each unit of the chain has a methyl group attached. It is translucent, autoclavable and has no known solvent at room temperature. It is slightly more susceptible than polyethylene to strong oxidizing agents. It offers the best stress-crack resistance of the polyolefins. Products made of polypropylene are brittle at 0°C and may crack or break if dropped from benchtop height.



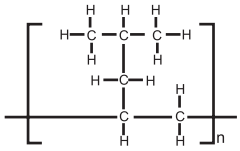
POLYPROPYLENE

Polypropylene copolymer (PPCO) replaces polyallomer (PA) and is an essentially linear copolymer with repeated sequences of ethylene and propylene. It combines some of the advantages of both polymers. PPCO is autoclavable and offers much of the high-temperature performance of polypropylene. It also provides some of the low-temperature strength and flexibility of polyethylene.



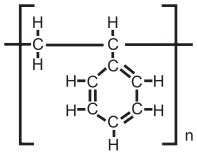
POLYPROPYLENE COPOLYMER

Polymethylpentene (PMP or TPX®) is similar to polypropylene, but it has an isobutyl group instead of a methyl group attached to each monomer group of the chain. Its chemical resistance is close to that of PP. It is more easily softened by unsaturated and aromatic hydrocarbons, and chlorinated solvents. PMP is slightly more susceptible than PP to attack by oxidizing agents. Its excellent transparency, rigidity and resistance to chemicals and high temperatures make PMP a superior material for labware. PMP withstands repeated autoclaving. It can withstand intermittent exposure to temperatures as high as 175°C. Products made of polymethylpentene are brittle at ambient temperature and may crack or break if dropped from benchtop height.



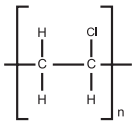
POLYMETHYLPENTENE

Polystyrene (PS) is rigid and non-toxic, with excellent dimensional stability and good chemical resistance to aqueous solutions, but limited resistance to solvents. This glass-clear material is commonly used for disposable laboratory products. Products made of polystyrene are brittle at ambient temperature and may crack or break if dropped from benchtop height.



POLYSTYRENE

Polyvinyl Chloride (PVC) is similar in structure to polyethylene, but each unit contains a chlorine atom. The chlorine atom renders it vulnerable to some solvents, but also makes it more resistant in many applications. PVC has extremely good resistance to oils (except essential oils) and very low permeability to most gases. Polyvinyl chloride is transparent and has a slight bluish tint. Narrow-mouth bottles made of this material are relatively thin-walled and can be flexed slightly. When blended with phthalate ester plasticizers, PVC becomes soft and pliable and can be extruded into flexible tubing.



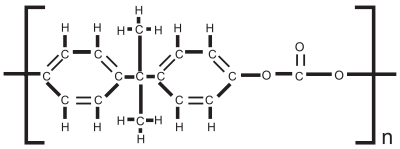
POLYVINYL CHLORIDE

Thermoplastic elastomer (TPE) is a type of polyolefin which, due to structure, molecular weight and chemistry, can be molded into autoclavable parts which are rubber-like in application and performance. It is used for several small caps and plugs on filtration products.

Engineering Resins

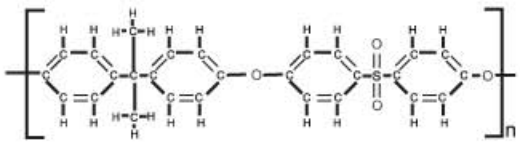
These resins offer exceptional strength and durability in demanding lab applications. For specific uses, they are superior to the polyolefins. Typical products are centrifuge ware, filterware and safety shields.

Polycarbonate (PC) is window-clear, amazingly strong and rigid. It is autoclavable, nontoxic and the toughest of all thermoplastics. PC is a special type of polyester in which dihydric phenols are joined through carbonate linkages. These linkages are subject to chemical reaction with bases and concentrated acids and hydrolytic attack at elevated temperatures (e.g., during autoclaving). This makes PC soluable in various organic solvents. For many applications, the transparency and unusual strength of PC offset these limitations. Its strength and dimensional stability make it ideal for high-speed centrifuge ware. Spectrophotometric analysis shows that the polycarbonate used in NALGENE safety products is essentially opaque to ultraviolet light from 200 to 380 nanometers (nm): 0% transmittance from 200-300 nm, 0.2% transmittance up to 380 nm. This covers the wavelengths emitted for germicidal applications such as laminar flow hoods (254 nm) and for fluorescence detection of dyes in electrophoresis or chromatography developing (350-360 nm).



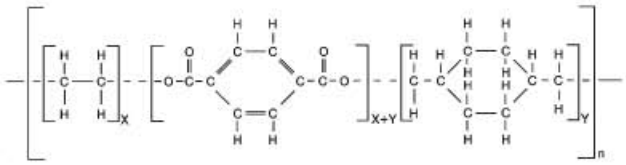
POLYCARBONATE

Polysulfone (PSF) Like polycarbonate, PSF is transparent, strong, non-toxic and extremely tough. PSF is less subject to hydrolytic attack during autoclaving than PC and has a natural straw-colored cast. PSF is resistant to acids, bases, aqueous solutions, aliphatic hydrocarbons and alcohols. PSF is composed of phenylene units linked by three different chemical groups – isopropylidene, ether and sulfone. Each of the three linkages imparts specific properties to the polymer, such as chemical resistance, temperature resistance and impact strength.



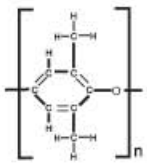
POLYSULFONE

Polyethylene Terephthalate G Copolyester (PETG) is similar to many other engineering resins. However, its glass-like clarity, toughness and excellent gas-barrier properties make it an outstanding choice for storing biologicals. Tests have shown PETG to be biologically equivalent to, or better than, Type 1 borosilicate glass bottles for cell culture applications. In tests using a wide variety of cell lines, PETG was determined to be non-cytotoxic, and media stored in PETG bottles demonstrated proliferative and morphological characteristics comparable to control media. In fact, the PETG bottles allowed growth of good monolayers directly on the surface of the bottle. PETG can be sterilized with radiation or compatible chemicals but cannot be autoclaved. Its chemical resistance is fair.



POLYETHYLENE TEREPHTHALATE G COPOLYESTER

Polyphenylene Oxides (PPO) A process for oxidative coupling of phenolic monomers is used to formulate Noryl[1] phenylene oxide-based thermoplastic resins. This family of engineering materials is characterized by outstanding dimensional stability at elevated temperatures, broad temperature-use range, outstanding hydrolytic stability and excellent dielectric properties over a wide range of frequencies and temperatures. Among their design advantages are: (1) excellent mechanical properties over temperatures from below -40°C (-40°F) to above 148°C (300°F); (2) self-extinguishing, non-dripping characteristics; (3) excellent dimensional stability and low water absorption; (4) resistance to aqueous chemical environments, and (5) excellent impact strength.



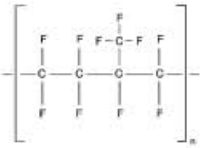
POLYPHENYLENE OXIDE

Fluorocarbons

Typical fluorocarbons are Teflon tetrafluoroethylene (TFE)* and Teflon fluorinated ethylene propylene (FEP)*. Both have remarkable chemical resistance.

Teflon TFE* is opaque white and has the lowest coefficient of friction of any solid. It makes superior stopcock and separatory funnel plugs.

Teflon FEP* is translucent, flexible and feels heavy because of its high density. It resists all known chemicals except molten alkali metals, elemental fluorine and fluorine precursors at elevated temperatures. It should not be used with concentrated perchloric acid. FEP withstands temperatures from -270°C to +205°C and may be sterilized repeatedly by all known chemical and thermal methods. It can even be boiled in nitric acid.

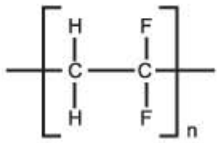


TEFLON FEP

Tefzel ETFE* is translucent white and slightly flexible. It is a close analog of Teflon* fluorocarbons, an ethylene tetrafluoroethylene copolymer. ETFE shares the remarkable chemical and temperature resistance of Teflon TFE* and FEP* and has even greater mechanical strength and impact resistance.

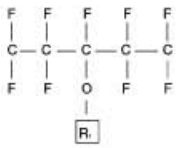
Halar ECTFE** is an alternating copolymer of ethylene and chlorotrifluoroethylene. This fluoropolymer withstands continuous exposure to extreme temperatures and maintains excellent mechanical properties across this entire range (from cryogenic temperatures to 180°C). It has excellent electrical properties and chemical resistance and has no known solvent at 121°C. It is also non-burning and radiation-resistant. Its ease of processing makes it suitable for a wide range of products.

Polyvinylidene Fluoride (PVDF, best known as Kynar*)** is a fluoropolymer with alternating CH2 and CF2 groups. PVDF is an opaque white resin. Extremely pure, it is superior for non-contaminating applications. Mechanical strength and abrasion resistance are high, similar to ECTFE. It resists UV radiation. The maximum service temperature for rotationally-molded PVDF tanks is 100°C. Up to this temperature, PVDF has excellent chemical resistance to weak bases and salts, strong acids, liquid halogens, strong oxidizing agents and aromatic, halogenated and aliphatic solvents. However, organic bases and short-chain ketones, esters and oxygenated solvents will severely attack PVDF at room temperature. Fuming nitric acid and concentrated sulfuric acid will cause softening. At temperatures approaching the service limit, strong caustic solutions will cause partial dissolution. Autoclavable if tanks are empty and externally supported.



POLYVINYLIDENE FLUORIDE

Teflon PFA* is translucent and slightly flexible. It has the widest temperature range of the fluoropolymers – from -270°C to +250°C – with superior chemical resistance across the entire range. Compared to TFE at 277°C, it has better strength, stiffness and creep resistance. PFA also has a low coefficient of friction and outstanding antistick properties and is flame-resistant.



TEFLON PFA

+Registered trademark of Mitsui & Co., Ltd.

[1]Registered trademark of General Electric

*or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

**or equivalent. Halar is a registered trademark of Solvay Solexis.

***Registered trademark of Elf Atochem

Reference/Use & Care Guide

The following material includes general guidelines on the use and care of plastic laboratory products. For more information, contact your NALGENE Labware Dealer or Thermo Fisher Scientific, NALGENE® and NUNC™ products.

North America

Technical Support
Thermo Fisher Scientific
NALGENE® and NUNC™ Products
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nnitech@thermofisher.com

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Fax: +44 (0)1432 376567
sales@nalgene.co.uk

Other Countries

International Department
Thermo Fisher Scientific
NALGENE® and NUNC™ Products
Rochester, NY USA
Tel: +1-585-899-7198
Fax: +1-585-899-7195
intlmktg@thermofisher.com

General Cleaning

We recommend using non-alkaline detergents for cleaning plastic labware, especially those products made of polycarbonate, which is particularly sensitive to alkaline attack.

NALGENE L-900 Liquid Detergent (Cat. No. 900) is designed to clean all plastics at a neutral pH. A 5% solution in water is usually sufficient but can be increased to 20% for stubborn residue or heavily-soiled labware. L-900 Detergent can be used in automatic washers for lightly- to normally-soiled items.

Soak the labware in the detergent for up to 3 hours, then gently wash with a cloth or sponge. Soak heavily-soiled items in a 5 to 20% concentration in water for 4 or more hours prior to washing. Rinse with tap water and then distilled water.

- Do not use abrasive cleaners or scouring pads on any plastic labware.
- Periodically disassemble and clean spigots and threads on bottles and closures to prevent salt build-up, which can cause leakage.
- Most plastics, particularly the polyolefins (LDPE, HDPE, PP, PMP and PPCO) have non-wetting surfaces that resist attack and are easy to clean.

Dishwashers

Labware washing machines can be used with all resins except LLDPE, acrylic and PS, due to temperature limitations.

Special note on polycarbonate (PC)

Repeated washings in the dishwasher weaken the exceptional strength of PC. PC labware that has been exposed to high stresses (such as those caused by centrifugation or use in vacuum chambers) should always be washed by hand using a mild, neutral pH, non-abrasive detergent without sheeting agents, such as NALGENE L-900.

Keep the dishwasher cycle time to a minimum. Use the plastics cycle and set the water temperature at 135°F (57°C) or lower. Remove the labware as soon as possible after cooling is complete. Avoid excessive abrasion of plastics by covering metal spindles with soft material such as plastic tubing. Plastic labware should be weighted down and held in place with accessory racks.

Ultrasonic Cleaners

Ultrasonic cleaning units may be used to clean labware as long as the labware does not rest directly on the transducer diaphragm.

Special Problems

Greases and Oils

For many applications, washing with a mild detergent will remove greases and oils. When more rigorous cleaning is needed, organic solvents may be used with caution. Extended exposure to these solvents may cause some swelling of polyolefins. Rinse off all solvents before using labware. Use only alcohols on PC, PSF, PS and PVC; other organic solvents will attack these plastics. Do not use organic solvents with acrylic.

Organic Matter

Chromic acid solution will remove organic matter, but will eventually embrittle plastics. To minimize embrittlement, soak plastic for no more than 4 hours. The following formula is the recommended cleaning agent:

Dissolve 120 grams of sodium dichromate (Na2, Cr_2O_7-$2H_2O$) in 1000 ml tap water. Carefully add 1600 ml concentrated sulfuric acid. Note: Because this solution generates considerable heat, we recommend external cooling. Do not mix in a plastic container.

This solution is designed to produce an excess of dichromate in the form of a precipitate which actually extends the useful life of chromic acid and dissolves as needed. This chromic acid solution can be used repeatedly until it begins to develop a greenish color, indicating a loss of potency. As a result of the excess dichromate built into this formula, the solution lasts much longer than commercially-available solutions.

Sodium hypochlorite solutions (bleach) are also effective in removing organic matter. Use at room temperature.

Centrifuge Ware

After centrifugation, loosen pellets by presoaking the tube or bottle overnight in a mild detergent solution (we recommend NALGENE L-900). Do not soak PC centrifuge ware in alkaline detergents. If the pellet contains microbiological or hazardous material, refer to Hazardous Matter section. After soaking, use a pipet or soft rubber policeman to further loosen the pellet. A soft bristle brush may be used if care is taken not to scratch the plastic.

Trace Level Cleaning

Summary of Average Element Content of 12 Plastics and Borosilicate Glass[1]

Material	No. of Elements	Total Conc., ppm	Major Constituents
PS	8 (8 N.D.*)	4	Na, Ti, Al
PSF	16 (12 N.D.)	17	Na, Fe, Ca
TFE	24	19	Ca, Pb/Fe, Cu
LDPE	18	23	Ca, Cl, K
PC	10	85	Cl, Br, Al
PMP	14	178	Ca, Mg, Zn
FEP	25	241	K, Ca, Mg
PVC-tubing	9	280	Fe, Zn, Sb
PP	21	519	Cl, Mg, Ca
HDPE	22	654	Ca, Zn, Si, Al, Na
ETFE	32	1,007	Cl, Pb, Si
PVC-rigid	7 (11 N.D.)	2,541	Sn, Ca, Mg
Borosilicate Glass	14	497,249	Si, B, Na

*N.D. = Not Detected

NOTE: Values listed in the chart above represent typical contents for major constituents. Various grades of plastics may vary from these values.

[1]Selection and Cleaning of Plastic Containers for Storage of Trace Element Samples, John R. Moody and Richard Lindstrom, ANALYTICAL CHEMISTRY, Vol. 49, Page 2264, December 1977.

As the chart "Summary of Average Element Content of 12 Plastics and Borosilicate Glass" shows, for most trace metal analysis, plastic is generally "cleaner" or less contaminated than glass or other materials. However, plastic does contain trace levels of certain metals. To minimize potential low-level contamination, remove these metals or leach them from plastic by soaking in 1N HCl and rinsing in distilled water. For extremely precise work, use HCl, followed by soaking in 1N HNO3 and rinsing in distilled water. Soaking time may vary according to individual needs, but plastic should be soaked no longer than 8 hours. If more rigorous cleaning is desired, increase the concentration of acids used. **Caution:** concentrated nitric acid is a strong oxidizing agent and will embrittle many plastics.

To remove trace organics which contribute to trace metal absorption, clean plastic surfaces with alcohol, alkalies, alcoholic alkalies or chloroform. A final rinse of 1N HCl also minimizes absorption of trace elements.

Polysulfone (PSF), a resin used in NALGENE centrifuge tubes and reusable filterware, is extremely "cleanable". The following qualification testing was performed on NALGENE PSF centrifuge tubes at The University of Rhode Island's Graduate School of Oceanography (URI-GSO).

URI-GSO was determining the concentration of trace metals in atmospheric aerosols and seawater from remote marine locations. They were measuring the input to the Pacific Ocean of heavy metals and other trace elements; pesticide, petroleum and plastic residues; other natural and man-made organic materials, as well as compounds causing acid rain. The trace metal concentrations in the samples were extremely low, so any labware used needed to be extremely cleanable to prevent leaching of contaminants from the vesels or filtration equipment into the samples. In addition, the labware could not irreversibly adsorb metals from sample solutions. The labware in question included filter holders, which were used during procedures for extracting various trace metals from seawater samples.

The following cleaning procedure was used:

1. One-week soak in 1:1, analytical reagent HCl: deionized water,
2. Deionized water rinse,
3. One-week soak in 1:1, analytical reagent HNO3: deionized water,
4. Deionized water rinse,
5. One-week soak in 1:1000, quartz redistilled HNO3: deionized water,
6. Deionized water rinse,
7. One-week soak in 1:1000, quartz redistilled HNO3: deionized water, and,
8. Deionized water rinse.

This cleaning procedure was generated from the procedures used at URI-GSO, J.R. Moody and R.M. Lindstrom Analytical Chemistry 49:2264 (1977) and conversations with faculty of the California Institute of Technology.

The following test procedure was used:

1. Approximately 25ml 1N quartz redistilled HNO3 was put into five of the centrifuge tubes.
2. Approximately 25ml of 1 part per billion aluminum, copper, lead and zinc in 1N quartz redistilled HNO3 was put into the other five centrifuge tubes.
3. The tubes were allowed to stand for one month, and the contents of the tubes were analyzed.

The analyses were performed by atomic absorption spectrophotometry on a Perkin Elmer 5000 equipped with an HGA 5000 utilizing Zeeman background correction. All standards used are traceable back to NBS (National Bureau of Standards).

The results and conclusions were:

1. The 1N quartz redistilled HNO3 had immeasurably low concentrations of metals (e.g., aluminum, copper and lead <0.1 parts per billion; zinc <0.01 parts per billion). **Therefore, once cleaned, polysulfone leaches insignificant amounts of these four metals into solution.**
2. The 1 part per billion aluminum, copper, lead and zinc solutions had, within experimental error, 1 part per billion aluminum, copper, lead and zinc. **Therefore, polysulfone does not adsorb these metals from an acidified solution.**

The analysis of aluminum, copper, lead and zinc involved a two-step extraction procedure. The first, a "liquid/liquid" extraction with an organic complexing agent, removed copper, lead and zinc. The second employed an iron hydroxide co-precipitation technique. Iron nitrate was added to the seawater and the pH was adjusted. Iron hydroxide and aluminum were filtered from the rest of the mixture. This is where the NALGENE reusable filter holders, molded of PSF, were used.

Hazardous Matter

Before labware contaminated with infectious or toxic materials is removed from the work area, it should be sterilized appropriately. Autoclaving is the preferred method for sterilization; however, any method of chemical disinfecting or heat sterilization appropriate for the particular plastic may be used (see below). Liquid waste containing biohazardous materials must always be decontaminated before disposal.

Labware that is contaminated with both biohazardous and radioactive material must first be sterilized. Methods for removing radioactive material depend on the isotope used, its quantity, half-life, material and solubility. For routine decontamination of non-infectious/non-toxic materials, first soak in decontaminant/cleaner for 24 hours at room temperature. Follow with several rinsings in distilled water. To accelerate decontamination, increase the cleaner concentration and solution temperature. Agitation and careful scrubbing with non-abrasive materials will also speed this process. Be particularly careful not to scratch PC. Always dispose of radioactive wastes and effluents properly.

For additional information on handling contaminated labware, contact your Biosafety/Radiation Safety Office, or refer to NIH Biohazards Safety Guide, Laboratory Safety Monograph and Radiation Safety Guide.

How to Remove RNAse or DNAse from Plastic Containers

RNAse, an enzyme that breaks down RNA, and DNAse, which breaks down DNA, are contaminants that can interfere with nucleotide research. DNAse can be destroyed by autoclaving for 15 minutes at 121°C OR by following any of the procedures listed here. One or more of the following techniques will inhibit or remove RNAse from your plastic container. Match the resin code on the bottom of your NALGENE container with the correct technique.

1. Heat at 180°C for at least 8 hours[1]
2. Rinse in chloroform[1]
3. Soak in a 0.1% aqueous solution of diethyl pyrocarbonate[2] (DEPC) for 2 hours at 37°C; rinse several times with sterile (DEPC-treated) water†; heat to 100°C for 15 minutes OR autoclave for 15 minutes at 121°C on a liquid/slow exhaust cycle. (Heating or autoclaving will remove DEPC residues.) **Note heating variations in the following chart.**
4. Clean equipment with a detergent solution, rinse thoroughly with water and rinse with 95% ethanol to dry. Soak the equipment in a 3% hydrogen peroxide (H_2O_2) solution for ten minutes at room temperature. Rinse the equipment thoroughly with DEPC-treated water[1,3].
5. Soak equipment in 0.1N Sodium Hydroxide (NaOH) in 0.1% EDTA in water overnight and then rinse thoroughly with DEPC-treated water.

RNAse Removal Chart - Techniques

Plastic Resin	1(Heat)	2(Rinse)	3(Soak)	4(Soak)	5(Soak)	Comments
ETFE		X	X	X	X	
FEP	X	X	X	X	X	
HDPE		X*	X	X	X	Heat to 100°C for 20 minutes
LDPE		X*	X	X	X	Heat to 70°C for 120 minutes
PC			X+	X+		
PETG			X	X	X	Heat to 60°C overnight
PFA	X	X	X	X	X	
PP/PPCO		X*	X	X	X	
PMP		X*	X	X	X	
HIPS			X	X	X	Heat to 70°C for 120 min.
PVC			X	X	X	Heat to 60°C overnight
TPE			X	X	X	

*Rinse only, no long-term contact
+Rinse copiously to minimize chemical attack

†DEPC-treated water: Add 0.1% DEPC to water and allow to sit for at least 12 hours at 37°C. Then heat the water to 100°C for 15 minutes or autoclave at 121°C (250°F) for 15 minutes.

[1]Sambrook, J.; Fritsch, E.F.; Maniatis, T.; "Extraction and Purification of RNA"; Molecular Cloning: A Laboratory Manual, Second Edition; 7.3, Cold Spring Harbor Laboratory Press (1989).

[2]Caution: DEPC is a suspected carcinogen and should be handled with care. DEPC solutions are irritating to the eyes, mucous membranes and skin.

[3]Titus, David E.; Nucleic Acid Detection, Purification and Labeling; Rapid Isolation of Total RNA; PROMEGA Protocols and Applications Guide, Second Edition; pp. 125-126, 203; Promega Corporation (1991).

Sterilizing Plastics

Autoclaving

Recommended autoclave cycle is 121°C, 15 psig (1bar) for 20 minutes.
For best results, use a slow exhaust cycle.

NNI recommends the autoclavability of NALGENE products be confirmed prior to use. This information can be found in our Reference / Physical Properties Guide on the inside back cover of the NALGENE Labware catalog.

Autoclaving represents one of the most severe application conditions to which NALGENE laboratory products may be subjected. Certain chemicals, which have no appreciable effect on plastics at room temperature, may cause deterioration at autoclaving temperatures. NNI recommends carefully cleaning with a neutral pH detergent prior to autoclaving to prevent contaminants from baking into the surface. After cleaning, rinse thoroughly in distilled water before autoclaving.

We recommend an autoclave cycle at 121°C, 15 psig (1bar) for 20 minutes. Under these conditions the plastic is very near its Heat Deflection Temperature and any force, weight or pressure bearing on the product can contribute to deformation or collapse.

Plastic vessels and containers cannot be sealed when autoclaving.

For best results, products should be free standing and loosely covered, or with their closures resting on top and the threads must be completely disengaged. During the decompression phase of the autoclaving cycle, the pressure within the vessel must be allowed to equalize. Any material placed over the opening has the potential to cause a vacuum to form, resulting in implosion or collapse.

The following practices should be avoided when autoclaving plastic products.

- Stacking of jars, vessels and carboys.
- Placing the product in an autoclaving basket with other objects on top.
- Tightening of closure prior to cooling.
- Securing the opening with aluminum foil, Blue Steriwrap, gauze, cotton or tape.
- Placing detergent or wetting solutions in containers (except those made of fluoropolymers).

Cycle Times

Plastics transfer heat more slowly than glass or metal and may take longer to reach sterilizing temperatures in the autoclave. Because of differences in heat transfer characteristics between plastics and inorganic materials, the contents of plastic containers may take longer to reach sterilization temperature (121°C). Therefore, longer autoclaving cycles are necessary for liquids in large-volume plastic containers. Adequate cycles can be determined only by experience with specific liquids and containers.

We recommend autoclaving the carboy empty, sterilizing the media or other liquid by in-line filtration, and then transferring it directly into the sterilized container.

Carboys with spigot must always be autoclaved empty with the spigot removed and disassembled.

- Chemical additives in steam will attack transparent plastics and cause a permanently glazed surface after autoclaving.
- Some transparent plastics may absorb minute amounts of water vapor and appear cloudy after autoclaving. The clouding will disappear as the plastic dries. Clearing may be accelerated in a drying oven at 110°C.
- Use polypropylene copolymer (PPCO) bottles instead of polysulfone (PSF) with Tween in the autoclave.
- Test tube racks filled with tubes must be autoclaved on a flat surface.

Specific Plastic Considerations

Polypropylene, polymethylpentene, polypropylene copolymer, ETFE, FEP and PFA may be autoclaved repeatedly at 121°C, 15 psig. Cycles should be at least 15 minutes to ensure sterility.

Polycarbonate products are autoclavable. They must be thoroughly rinsed before autoclaving because detergent residues cause crazing and spotting. Autoclaving cycles should be limited to 20 minutes at 121°C. PC shows some loss of mechanical strength after repeated autoclaving and therefore may not function well under high-stress applications, such as centrifugation. Our PC vacuum chambers are considered “not autoclavable” for this reason.

Do not use strong alkaline detergents on polycarbonate. Do not use boiler steam containing alkaline chemical additives that may attack the plastic and cause the item to fail.

Polysulfone products are autoclavable. They are somewhat weakened by repeated autoclaving, although less than polycarbonate. If autoclaved repeatedly, polysulfone products will eventually fail under high-stress applications, such as high-speed centrifugation.

NALGENE PVC Tubing can be autoclaved, but ethylene oxide or chemical disinfectant is preferred. If you autoclave it, follow these guidelines:

Clean and rinse tubing thoroughly, including final rinse with distilled or deionized water. Coil tubing loosely and keep ends open. Wrap in muslin or linen; tape or tie loosely. Place on a non-metallic tray in the autoclave so wrapped tubing is not touching wall or rack of autoclave. Do not stack anything on the tubing. Use 15-minute cycle at 121°C, 15 psig. Restore clarity of tubing by drying approximately 2 hours at a temperature no higher than 75°C.

NALGENE Silicone Tubing can be autoclaved for 30 minutes at 121°C, 15 psig in muslin cloth or sterilizing paper.

Products made of the following plastics are not autoclavable under any conditions: polystyrene, polyvinyl chloride (except PVC tubing), styrene acrylonitrile, acrylic, low-density and high-density polyethylene, polyurethane and polyethylene teraphthalate G Copolyester.

Sterilizing – Other Methods

Gas: All of the resins mentioned above may be gas-sterilized (ethylene oxide, formaldehyde). We recommend allowing an appropriate aeration time suited to the particular application before reusing the item.

Chemical Disinfectants: In general, all of the aforementioned plastics can be subjected to commonly-used disinfectants (quaternary ammonium compounds, iodophors, formalin, benzalkonium chloride, ethanol, etc.). There may be some surface attack (crazing) when using a more chemically aggressive disinfectant on the less resistant plastics (PS, SAN, PVC, PC, acrylic, PETG) with prolonged use.

Dry Heat: Dry heat sterilization is recommended only for ACL (acetal or polyoxymethylene), ECTFE (ethylene-tetrafluoroethylene copolymer), ETFE (ethylene-tetrafluoroethylene), FEP (fluorinated ethylene propylene), PPCO (polypropylene copolymer), PC (polycarbonate), PFA (perfluoroalkoxy), PMP (polymethylpentene), PP (polypropylene) and TFE (tetrafluoroethylene). Maximum temperatures and minimum sterilization times at each temperature for each of these resins are given in the following table:

Dry Heat Sterilization

Resins	Temperature	Time
FEP, PFA, PMP*, TFE	170°C (338°F)	60 min.
PSF	160°C (320°F)	120 min.
ECTFE, ETFE	150°C (302°F)	150 min.
	140°C (284°F)	180 min.
PPCO*, PC, PP*	121°C (250°F)	Overnight

*with no load, no stacking

Microwaving: In general, all plastics allow transmission of microwaves. Among commonly-used plastics, PMP and PSF are most transparent to microwaves. We recommend their use when the chemical and temperature resistance of PMP and PSF are compatible with the material to be heated. Use fluoropolymers when aggressive chemicals, such as acids or solvents, are being heated; proper venting is essential. **Closure threads must be completely disengaged before heating bottles or containers in a microwave oven.**

Pre-Sterilized NALGENE Labware

How is the sterility of NALGENE Labware assured?

Some NALGENE labware is sterilized and tested after assembly, and sterility is guaranteed as long as the packaging is intact. Two methods of sterilization are used – ethylene oxide gas and gamma irradiation. Disposable filtration, sterile media bottles and cryogenic products are sterilized following the Association for Advancement of Medical Instrumentation (AAMI) recommended practices.

Ethylene Oxide

Ethylene oxide (EtO) is used for sterilization where low temperature and pressure are necessary (the material to be sterilized cannot be autoclaved). The labware is exposed to EtO in chambers where temperature, humidity and pressure are carefully controlled and monitored. We may use three methods to assess the outcome of the EtO procedure. **External color indicators** on the packaging demonstrate exposure to the gas but not sterility. **Biological indicators** are used to evaluate sterility. These indicators are resistant strains of bacterial spores, usually Bacillus subtillis var. niger, whose failure to grow demonstrates the effectiveness of the EtO cycle. **Sterility testing** may be performed on filterware after the sterilization process. As with biological indicators, the criterion for confirming sterility is the absence of microbial growth.

After EtO sterilization, the labware is quarantined until all test results are known. This quarantine period lasts from 7 to 14 days and assures adequate time for the outgassing of EtO and possible residues.

NALGENE labware sterilized by EtO includes syringe units, analytical units and funnels.

Gamma Irradiation

During this procedure, the labware is exposed to high-energy ionizing gamma radiation from a Cobalt 60 source at room temperature. Product sterility is achieved by an accumulated absorbed radiation dosage measured in kilogray (kGy). Dosage levels are selected by a process verification dose experiment, which includes bioburden determination and sterility testing. The sterility of the product is assured by dosimetric release, which confirms that the specified minimum dose has been delivered to the product.

NALGENE labware sterilized by gamma irradiation includes all of our tissue culture filter units, our filter unit receivers, cryoware and PETG bottles.

Other Testing

NALGENE sterile labware products may also undergo testing for bioburden, pyrogens and cytotoxicity. Details on these tests are available from Technical Support. Certification of sterility and compliance with specifications will be supplied upon written request. Write to Quality Assurance Department, Thermo Fisher Scientific NALGENE® and NUNC™ Products 75 Panorama Creek Drive, Rochester, New York 14625 USA.

[1]All materials (including plastic housings and caps) used in our tissue culture units are tested and shown to be noncytotoxic, using both mouse fibroblast L929 cells and the more sensitive human diploid lung cell line WI-38. Guess, W.L., Rosenbluth, S.A., Schmidt, B., and Autian, J., Agar diffusion method for toxicity screening of plastics on cultured cell monolayers. J. Pharm Sci., 54:1, p 1545-7, 1965.

The Environmental Impact of NALGENE Products

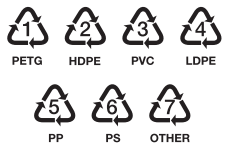
Thermo Fisher Scientific is very sensitive to the impact its products and packaging have on the environment and has taken several steps to make them more environmentally friendly:

- We review all new NALGENE products for environmental impact, recyclability and reusability.
- We review all packaging in an effort to reduce packaging and improve recyclability.
- We only use packaging peanuts made without CFCs (chlorofluorocarbons) and we reuse the peanuts that we receive when we ship our own products.
- We have eliminated the use of heavy-metal-based colorants in products produced at our Rochester facility.
- We offer a complete line of reusable products designed to eliminate the amount of waste released into the waste stream. For nearly every disposable NALGENE product, there is an equivalent reusable product available. Your rep can help you choose the appropriate reusable equivalent, or you can call Technical Support at 1-800-625-4327. International customers, contact our International Department at +1 585-899-7198, Fax +1 585-899-7195, intlmktg@thermofisher.com. In Europe, contact us at Tel +44 (0) 1432 263933, Fax +44 (0) 1432 376567, sales@nalgene.co.uk.

Recycling NALGENE Products and Packaging

The recycling process involves sorting plastic products by resin type for reclamation and using them to produce high-quality recycled resins for use as raw material in new products.

To make that easier, the Society of the Plastics Industry (SPI) has developed a system to identify the types of plastics used in plastic containers. At least 36 states have enacted legislation requiring these codes, which immediately identify the resin to recyclers. Each resin we use has been assigned a specific number.



NOTE: The number 7 has been assigned to “OTHER” resins. We do not use the word “OTHER”. Instead, we indicate the specific resin used to help identify the bottle material.

This code has been molded into the base of all NALGENE injection- and extrusion-blow-molded bottles and containers greater than 500 ml, as well as all filter products.

CAUTION: Does not imply that the bottle may be recycled or disposed of in the general waste stream after use. Follow appropriate decontamination and disposal procedures when the bottle has been in contact with hazardous or infectious materials.

Reusing or Disposing of NALGENE PETG Media Bottles

PETG bottles can be reused after storing tissue culture media, buffers or other biologicals. To be sure that the container is made of PETG, check the bottom for one or both of these marks: the letters “PETG”; the recycling symbol:

(For more information on recycling codes, see “The Environmental Impact of NALGENE Products”.)

First, the bottles must be disinfected. UV light can be used, but imparts a slight yellow cast. Place uncapped (caps facing upward to expose inside surface) approximately 20 inches below a 30-watt Germicidal UV lamp for at least one hour. Ethylene oxide (EtO) gas is also acceptable. PETG bottles and their HDPE closures can also be sterilized using a concentration (1:1 in sterile water) or a 1:10 (in sterile water) dilution of sodium hypochlorite (bleach or Clorox*). Bottles should be exposed to the bleach for at least 5 minutes.

CAUTION: Do not use phenolic-based disinfectants such as Lysol** or O-Syl**. These will chemically attack the bottles.

For disposal, PETG bottles should first be disinfected. Autoclaving in a proper container or bag will melt the bottles for incineration. Properly burned, PETG produces only CO_2 and H_2O.

PETG bottles can also be recycled with consumer PET products, such as soft drink bottles. They should first be disinfected using chemicals or autoclaving.

*Registered trademark of Clorox Company

**Registered trademark of National Laboratories

Interpretation of Chemical Resistance

The Chemical Resistance Chart and Chemical Resistance Summary Chart that follow are general guidelines for NALGENE products only. Because so many factors can affect the chemical resistance of a given product, you should test under your own conditions. If any doubt exists about specific applications of NALGENE products, please contact Technical Service, Thermo Fisher Scientific, NALGENE and Nunc products, 75 Panorama Creek Drive, Rochester, New York 14625-2385, or call (800) 625-4327, Fax (800) 625-4363. International customers, contact our International Department at +1 (585) 899-7198, Fax +1 (585) 899-7195. In Europe, contact NALGENE at +44 (0) 1432 263933, Fax +44 (0) 1432 376567.

Additional Chemical Resistance Information

This chemical resistance chart is to be used for all labware including containers up to 50L. For NALGENE centrifugeware please refer to those charts in this catalog.

For chemical resistance of PETG (polyethylene terephthalate copolyester), see below.

For NALGENE fluorinated containers, including fluorinated high-density polyethylene (FLPE) and fluorinated polypropylene (FLPP), see inside back cover.

Effects of Chemicals on Plastics

Chemicals can affect the strength, flexibility, surface appearance, color, dimensions or weight of plastics. The basic modes of interaction which cause these changes are: (1) chemical attack on the polymer chain, with resultant reduction in physical properties, including oxidation; reaction of functional groups in or on the chain, and depolymerization; (2) physical change, including absorption of solvents, resulting in softening and swelling of the plastic; permeation of solvent through the plastic,and dissolution in a solvent, and (3) stress-cracking from the interaction of a "stress-cracking agent" with molded-in or external stresses. Also see "Chemical Resistance Classification".

The reactive combination of compounds of two or more classes may cause a synergistic or undesirable chemical effect. Other factors affecting chemical resistance include temperature, pressure and internal or external stresses (e.g., centrifugation), length of exposure and concentration of the chemical. As temperature increases, resistance to attack decreases.

Mixing and/or dilution of certain chemicals in NALGENE labware can be potentially dangerous. The reactive combination of different chemicals or compounds of two or more classes may cause an undesirable chemical effect or result in an increased temperature which can affect chemical resistance (as temperature increases, resistance to attack decreases). Other factors affecting chemical resistance include pressure and internal or external stresses (e.g., centrifugation), length of exposure and concentration of the chemical.

Environmental Stress-Cracking

Environmental stress-cracking is the failure of a plastic material in the presence of certain types of chemicals. This failure is not a result of chemical attack. Simultaneous presence of three factors causes stress-cracking: tensile strength, a stress-cracking agent and inherent susceptibility of the plastic to stress-cracking.

Common stress-cracking agents are detergents, surface active chemicals, lubricants, oils, ultra-pure water and plating additives such as brighteners and wetting agents. Relatively small concentrations of stress-cracking agent may be sufficient to cause cracking.

Mixing and/or dilution of certain chemicals may result in reactions that produce heat and can cause product failure. Pre-test your specific usage and always follow correct lab safety procedures.

ATTENTION: Please be aware that, although several polymers may have excellent resistance to various flammable organic chemicals and solvents, OSHA H CFR 29 1910.106 for flammable and combustible materials, or other local regulations, may restrict the volumes of solvents which may legally be stored in an enclosed area.

Caution

Do not store strong oxidizing agents in plastic labware except that made of FEP or PFA. Prolonged exposure causes embrittlement and failure. While prolonged storage may not be intended at time of filling, a forgotten container will fail in time and result in leakage of contents. Do not place any plastic labware in a flame.

Quickly and easily search our extensive chemical resistance database at: www.NALGENElabware.com

First letter of each pair applies to conditions at 20°C; the second to those at 50°C. At 20°C->EG<-at 50°C.

Resin Codes:

ECTFE	Halar ECTFE* (ethylene-chlorotrifluoroethylene copolymer)
ETFE	Tefzel ETFE† (ethylene-tetrafluoroethylene)
FEP	Teflon FEP† (fluorinated ethylene propylene)
HDPE	high-density polyethylene
FLPE	fluorinated polyethylene
LDPE	low-density polyethylene
PC	polycarbonate
PEI	polyetherimide
PETG	polyethylene terephthalate copolymer
PFA	Teflon PFA† (polyfluoroalkoxy)
PMMA	polymethyl methacrylate (acrylic)
PMP	polymethylpentene
PP	polypropylene
PPCO††	polypropylene copolymer
PS	polystyrene
PSF	polysulfone
PVC	polyvinyl chloride
PVDF	polyvinylidene fluoride
RESMER	RESMER manufacturing technology
SAN	styrene acrylonitrile
TFE	Teflon TFE† (tetrafluoroethylene)
TMX	Thermanox
PMX	Permanox
XLPE	cross-linked high-density polyethylene

*Halar is a registered trademark of Solvay Solexis.

†Or equivalent. Teflon and Tefzel are registered trademarks of DuPont.

††PPCO has replaced polyallomer (PA) in all products.

	LDPE		HDPE		PP		PPCO		PMP		PETG		FEP		TFE		PFA		ECTFE		ETFE		PC		Rigid PVC		Flex. PVC		PSF		PS		FLPE		RESMER		PMMA		SAN		PEI		XLPE		PVDF	
CHEMICAL	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°
1,4-Dioxane, pure	G	F	G	G	N	N	G	F	F	N	-	-	E	E	E	E	E	E	E	F	N	N	N	N	N	N	N	N	N	N	E	E	F	N	N	N	N	N	-	-	F	N	N	N
2,2,4-Trimethylpentane, pure	F	N	F	N	F	N	F	N	F	N	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	G	F	N	N	G	F	-	-	-	-	-	-	-	-	E	E
2,4,6-Trinitrophenol, pure	N	N	N	N	N	N	N	N	E	E	-	-	E	E	E	E	E	E	G	F	G	F	N	N	N	N	N	N	N	N	G	F	N	N	G	F	-	-	E	E	-	-	G	N	G	N
2-Methoxyethanol, pure	E	G	E	E	G	F	E	E	E	E	F	N	E	E	E	E	E	E	E	G	E	E	N	N	F	N	F	N	N	N	N	N	E	E	G	F	-	-	N	N	-	-	-	-	E	E
2-Propanol, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	N	G	F	E	G	E	E	E	E	N	N	E	F	E	E	E	E	E	E
Acetaldehyde, pure	G	N	G	F	G	N	G	N	G	N	-	-	E	E	E	E	E	E	G	F	E	E	N	N	N	N	N	N	N	N	N	N	G	F	G	G	N	N	N	N	N	N	N	N	N	N
Acetamide, saturated	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	E	E	G	G	E	E	-	-	E	E	E	-	E	E	G	N
Acetic Acid, 5%	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	E	E	E	E	E	E	E	E	G	E	F	E	G	E	E	E	G	E	E	E	E	E	F	E	E	E	E	E	E	E	E

E - No damage after 30 days of constant exposure. G - Little or no damage after 30 days of constant exposure. F - Some effect after 7 days of constant exposure. N - Immediate damage may occur. Not recommended for continuous use.

CHEMICAL	LDPE		HDPE		PP		PPCO		PMP		PETG		FEP		TFE		PFA		ECTFE		ETFE		PC		Rigid PVC		Flex. PVC		PSF		PS		FLPE		RESMER		PMMA		SAN		PEI		XLPE		PVDF	
	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°
Acetic Acid, 50%	G	F	E	G	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	G	E	E	G	F	E	N	F	N	E	E	G	G	E	G	G	G	N	N	E	F	G	F	E	E	E	E
Acetic Acid, Glacial	G	N	G	G	E	G	E	G	G	G	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	N	N	N	E	E	F	N	G	G	F	N	N	N	N	N	N	N	F	N	E	G
Acetic Anhydride, pure	N	N	F	F	G	F	G	F	E	G	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	F	F	N	N	N	N	N	N	N	N	N	N	N	N
Acetone, pure	G	N	N	N	F	N	N	N	E	E	N	N	E	E	E	E	E	E	E	G	G	N	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	F	N	N	N	N	N
Acetonitrile, pure	E	E	E	E	E	G	F	N	F	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	E	E	F	N	N	N	N	N	-	-	N	N	G	G
Acetophenone, pure	N	N	F	F	F	N	F	N	G	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	G	G	F	N	N	N	N	N	-	-	-	-	N	N
Acrylonitrile, pure	E	E	E	E	F	N	F	N	F	N	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	E	E	F	N	-	-	-	-	-	-	E	E	G	N
Adipic Acid, pure	E	G	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	G	E	E	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Alanine, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	-	-	E	G	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	G	N
Allyl Alcohol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	G	E	N	G	N	G	F	G	F	E	E	E	E	N	N	N	N	-	-	E	E	E	G
Aluminum Chloride, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	E	G	G	E	E	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E
Aluminum Hydroxide, pure	E	G	E	E	E	G	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	G	G	G	G	G	E	E	E	E	-	-	G	G	-	-	E	E	E	E
Aluminum Salts, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	G	E	E	E	G	E	E	E	E	-	-	E	G	-	-	E	E	E	E
Amino Acids, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	G	N
Ammonia, 25%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	E	N	G	F	E	G	E	G	F	F	E	G	E	-	E	G	G	F	E	E	N	N
Ammonia, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	E	E	G	F	G	F	E	G	F	F	E	G	E	-	E	G	G	N	E	E	N	N
Ammonium Acetate, saturated	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	G	E	E	G	N	E	E	E	E	E	E	E	E	-	-	E	E	-	-	-	-	E	E
Ammonium Chloride, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	G	E	E	E	E	E	E	E	E	E	-	E	E	E	E	E	E	E	E
Ammonium Glycolate, pure	E	G	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	G	F	G	G	E	E	E	E	E	E	-	-	E	E	-	-	-	-	E	E
Ammonium Hydroxide, 5%	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	G	G	G	E	F	F	F	E	G	E	-	E	E	E	G	E	E	E	E
Ammonium Hydroxide, 30%	E	G	E	E	E	G	E	G	E	G	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	E	G	F	G	G	G	F	F	F	E	G	E	-	E	G	G	N	E	E	E	E
Ammonium Oxalate, pure	E	G	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	N	E	E	E	E	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Ammonium Salts, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E	G	E	E	G	G	E	E	E	E	-	-	E	G	-	-	E	E	E	E
Amyl Alcohol, pure	E	E	E	E	E	F	E	E	G	F	-	-	E	E	E	E	E	E	E	E	E	E	G	F	E	N	G	N	E	E	G	F	E	E	E	E	N	N	E	N	E	E	E	E	E	E
Amyl Chloride, pure	N	N	F	N	N	N	N	N	F	F	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	G	F	F	N	-	-	N	N	-	-	N	N	E	E
Aniline, pure	E	G	G	F	E	G	G	F	G	F	-	-	E	E	E	E	E	E	G	N	E	G	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	E	E	F	N	E	F
Aqua Regia, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	N	N	N	N	-	-	G	N	N	N	N	N	G	N
Arsenic Acid, pure	G	F	E	E	E	E	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	-	-	E	E	E	E	E	E	-	-	-	-	-	-	E	E	E	E
Benzaldehyde, pure	E	G	G	N	E	G	E	G	E	F	-	-	E	E	E	E	E	E	E	F	E	F	N	N	N	N	N	N	F	N	N	N	G	N	F	N	N	N	N	N	F	N	N	N	F	N
Benzenamine, pure	E	G	G	F	E	G	G	F	G	F	-	-	E	E	E	E	E	E	G	N	E	G	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	-	-	F	N	E	F
Benzene, pure	N	N	N	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	F	N	N	N	E	E
Benzoic Acid, saturated	E	E	E	E	E	G	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	E	G	F	F	G	G	E	E	G	G	E	E	E	E	-	-	N	N	E	E
Benzol, pure	N	N	N	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	F	N	N	N	E	E
Benzyl Acetate, pure	E	G	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	G	E	G	F	N	N	N	N	N	N	N	N	N	E	E	F	N	-	-	N	N	-	-	-	-	-	-
Benzyl Alcohol, pure	N	N	F	N	G	G	N	N	G	G	N	N	E	E	E	E	E	E	E	E	E	E	N	N	G	F	F	N	N	N	N	N	G	G	F	N	N	N	G	N	-	-	-	-	E	E
Boric Acid, pure	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	-	-	E	E	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Bromine, pure	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	F	N	N	N	N	N	N	N	N	N	F	N	N	N	N	N	N	N	G	G	N	N	E	E
Bromobenzene, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	G	N	E	F	N	N	N	N	N	N	N	N	N	N	F	F	F	N	-	-	N	N	-	-	-	-	E	E
Bromoform, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	G	F	E	F	N	N	N	N	N	N	N	N	N	N	F	F	F	N	-	-	N	N	N	N	-	-	E	E
Butadiene, pure	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	F	N	N	N	N	N	N	N	G	F	G	F	-	-	N	N	-	-	-	-	E	E
Butyl Acetate, pure	G	F	G	F	F	N	G	F	F	F	-	-	E	E	E	E	E	E	E	G	E	G	N	N	E	N	N	N	N	N	N	N	E	G	-	-	N	N	N	N	G	N	F	N	F	N
Butyl Chloride, pure	N	N	N	N	N	N	N	N	F	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	F	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	-	-	-	-	E	E
Butyric Acid, pure	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	E	N	N	N	G	G	N	N	F	N	N	N	N	N	N	N	-	-	N	N	E	E
Calcium Chloride, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E
Calcium Hydroxide, concentrated	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	G	G	G	G	G	F	F	E	G	F	N	E	E	N	N	E	E	E	E
Calcium Hypochlorite, saturated	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	F	N	E	E	E	G	F	F	E	G	E	-	E	E	E	G	G	G	E	E
Carbazole, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	E	E	E	E	E	E	-	-	E	E	-	-	-	-	-	-
Carbon Disulfide, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	F	E	G	N	N	N	N	N	N	N	N	N	N	N	N	-	-	N	N	N	N	-	-	N	N	G	N
Carbon Tetrachloride, pure	F	N	G	F	G	F	N	N	N	N	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	N	N	N	N	N	N	N	E	G	F	N	N	N	F	N	E	-	N	N	E	E

E - No damage after 30 days of constant exposure.

G - Little or no damage after 30 days of constant exposure.

F - Some effect after 7 days of constant exposure.

N - Immediate damage may occur. Not recommended for continuous use.

CHEMICAL	LDPE		HDPE		PP		PPCO		PMP		PETG		FEP		TFE		PFA		ECTFE		ETFE		PC		Rigid PVC		Flex. PVC		PSF		PS		FLPE		RESMER		PMMA		SAN		PEI		XLPE		PVDF	
	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°
Caustic Potash, 30%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	E	E	G	N	E	G	G	G	F	F	E	G	E	-	E	E	G	F	E	E	E	G
Caustic Potash, 50%	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	G	F	N	E	F	E	G	F	F	E	G	E	N	E	G	G	F	E	E	N	N
Caustic Potash, concentrated	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	G	F	N	E	F	G	G	F	F	E	G	E	N	E	G	G	F	E	E	E	G
Caustic Soda, 1%	E	E	F	F	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	F	E	E	E	E	N	N	E	G	E	E	E	E	E	G	E	E	E	E
Caustic Soda, 50%	G	G	G	F	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	G	F	N	E	G	E	G	N	N	E	G	E	N	E	G	G	F	E	E	N	N
Caustic Soda, concentrated	G	G	G	F	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	G	F	N	E	G	E	G	N	N	E	G	E	N	E	G	G	F	E	E	N	N
Cedarwood Oil, pure	N	N	F	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	G	E	G	G	F	F	N	N	N	F	F	N	N	-	-	E	E	-	-	G	F	E	E	-	-	E	E
Cellosolve Acetate, pure	E	G	E	E	F	N	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	G	F	N	E	N	N	N	N	N	N	N	E	E	-	-	-	-	N	N	-	-	-	-	E	G
Chlorine, water solution	G	N	G	G	F	N	F	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	E	G	N	N	F	N	G	G	F	N	F	N	F	N	F	N	E	N	E	E
Chlorine, wet gas	G	N	G	F	F	N	F	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	G	F	N	N	F	N	N	N	N	N	G	F	-	-	F	N	N	N	F	N	F	N	E	E
Chlorine Wet Gas, 10%	G	N	G	F	F	N	F	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	G	F	N	N	F	N	N	N	N	N	G	F	-	-	F	N	G	G	G	F	G	F	E	E
Chlorine, Dry Gas, 10%	G	N	E	F	F	N	G	N	G	N	-	-	E	E	E	E	E	E	E	E	E	E	E	G	N	N	E	G	N	N	N	N	E	F	-	-	F	F	G	G	G	F	G	F	E	E
Chloroacetic Acid, pure	E	E	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	N	N	N	N	G	N	E	E	G	F	N	N	N	N	-	-	N	N	N	N
Chlorobenzene, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	G	F	E	E	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	-	-	N	N	E	E
Chloroform, pure	F	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	G	F	E	G	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	N	N	N	N	E	G
Chromic Acid, 10%	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	G	E	N	E	G	E	G	E	E	E	G	F	N	E	G	E	G	E	E	E	E
Chromic Acid, 20%	E	E	E	E	G	G	G	F	E	E	G	-	E	E	E	E	E	E	E	E	E	E	G	F	N	N	G	N	N	N	G	G	E	E	G	G	N	N	E	G	F	N	E	E	E	E
Chromic Acid, 50%	E	E	E	E	G	F	G	F	G	G	-	-	E	E	E	E	E	E	E	E	E	E	F	N	N	N	G	N	N	N	F	N	E	E	F	N	N	N	F	F	N	N	E	G	E	G
Chromic Acid: Surfuric Acid Mixture, 96%	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	G	F	E	G
Cinnamon Oil, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	G	F	N	N	N	N	F	F	N	N	-	-	E	E	-	-	N	N	E	E	-	-	-	-
Citric Acid, 10%	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	E	E	E	E	E	E	E	E	-	E	E	E	E	E	E	E	E
Citric Acid, 1M	E	E	E	E	E	E	E	E	E	E	G	F	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	E	E	E	E	E	E	E	E	-	E	E	E	E	E	E	E	E
Copper Sulfate, pure	E	E	E	E	E	E	E	E	E	E	E	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E
Cresol, pure	N	N	F	N	G	F	G	F	N	N	-	-	E	E	E	E	E	E	E	G	E	E	N	N	N	N	N	N	N	N	F	N	G	G	F	N	N	N	N	N	-	-	E	N	E	G
Cyclohexane, pure	F	N	F	N	G	N	F	N	N	N	G	N	E	E	E	E	E	E	E	G	E	E	E	F	N	N	N	N	N	N	N	N	G	F	G	F	G	-	F	N	E	E	N	N	E	E
Cyclohexanone, pure	N	N	F	N	F	N	F	N	G	F	N	N	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	-	-	N	N	G	N
Cyclopentane, pure	N	N	F	N	F	N	F	N	F	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	F	N	N	N	N	N	N	N	G	F	G	F	-	-	-	-	-	-	-	-	E	E
Decahydronaphthalene, pure	G	F	E	G	N	N	G	F	F	N	-	-	E	E	E	E	E	E	E	E	E	E	E	-	E	G	N	N	N	N	N	N	E	E	F	N	N	N	E	E	-	-	-	-	-	-
Decalin, pure	G	F	E	G	N	N	G	F	F	N	-	-	E	E	E	E	E	E	E	E	E	E	E	-	E	G	N	N	N	N	N	N	E	E	F	N	N	N	E	E	-	-	-	-	-	-
Diacetone, pure	N	N	N	N	G	F	G	F	F	F	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	F	F	N	N	N	N	N	N	-	-	-	-	N	N
Diacetone Alcohol, pure	F	N	E	E	G	F	E	F	E	E	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	E	F	E	E	E	G	N	N	N	N	-	-	-	-	F	N
Dibutyl Phthalate, pure	F	N	F	N	G	N	-	-	G	G	-	-	E	E	E	E	E	E	G	N	E	G	G	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	G	F	F	F	N	N
Diethyl Benzene, pure	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	E	F	N	N	N	N	N	N	N	N	N	G	F	F	N	-	-	-	-	-	-	-	-	E	E
Diethyl Ether, pure	N	N	F	N	F	N	N	N	N	N	E	-	E	E	E	E	E	E	E	G	E	E	N	N	E	N	N	N	N	N	N	N	G	F	-	-	N	N	N	N	E	-	N	N	E	G
Diethyl Ketone, pure	N	N	N	N	G	G	G	G	G	F	-	-	E	E	E	E	E	E	G	F	G	F	N	N	N	N	N	N	N	N	N	N	F	F	N	N	N	N	N	N	-	-	F	N	N	N
Diethyl Malonate, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	F	N	G	N	N	N	F	F	N	N	E	E	-	-	-	-	N	N	-	-	-	-	N	N
Diethylamine, pure	N	N	F	N	G	N	G	N	F	F	-	-	E	E	E	E	E	E	E	N	E	G	N	N	N	N	N	N	G	F	G	G	N	N	E	G	-	-	-	-	E	-	-	-	G	N
Diethylene Dioxide, pure	G	F	G	G	N	N	G	F	F	N	-	-	E	E	E	E	E	E	E	F	E	F	N	N	N	N	N	N	N	N	N	N	E	E	F	N	N	N	N	N	-	-	F	N	N	N
Diethylene Glycol, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	F	F	N	F	N	G	G	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E
Diethylene Glycol Monoethyl Ether, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	N	N	N	F	F	N	N	E	E	-	-	-	-	-	-	-	-	-	-	N	N
Dimethyl Acetamide, pure	F	N	E	E	E	E	E	E	F	G	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	G	G	-	-	-	-	-	-	E	-	-	-	N	N
Dimethyl Formamide, pure	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	G	G	G	G	N	N	N	N	N	N	N	N	N	N	G	G	-	-	N	N	N	N	E	N	-	-	N	N
Dimethylsulfoxide, pure	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	E	G	E	E	E	E	-	-	-	-	-	-	-	-	N	N
Dioxane, pure	G	F	G	G	N	N	G	F	F	N	-	-	E	E	E	E	E	E	E	F	E	F	N	N	N	N	N	N	N	N	N	N	E	E	F	N	N	N	N	N	-	-	F	N	N	N
Dipropylene Glycol, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	F	G	F	F	N	G	G	E	E	E	E	E	E	-	-	E	E	E	E	E	E	N	N
DMSO, pure	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	E	G	E	E	E	E	-	-	-	-	-	-	-	-	N	N
Ethanol, 40%	E	G	E	E	E	E	E	E	E	G	G	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	G	E	G	E	E	E	E	N	N	E	E	E	E	E	E	E	E

E - No damage after 30 days of constant exposure.

G - Little or no damage after 30 days of constant exposure.

F - Some effect after 7 days of constant exposure.

N - Immediate damage may occur. Not recommended for continuous use.

CHEMICAL	LDPE		HDPE		PP		PPCO		PMP		PETG		FEP		TFE		PFA		ECTFE		ETFE		PC		Rigid PVC		Flex. PVC		PSF		PS		FLPE		RESMER		PMMA		SAN		PEI		XLPE		PVDF	
	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°
Ether, pure	N	N	F	N	N	N	N	N	F	N	E	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	G	F	-	-	-	-	N	N	E	-	N	N	G	N
Ethyl Acetate, pure	E	E	E	E	G	N	G	F	F	N	N	N	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	E	E	-	-	N	N	N	N	G	N	F	N	N	N
Ethyl Alcohol, 40%	E	G	E	E	E	E	E	E	E	G	F	N	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	G	E	G	E	E	E	E	N	N	E	E	E	E	E	E
Ethyl Alcohol, 96%	E	G	E	G	E	E	E	E	E	G	F	N	E	E	E	E	E	E	E	E	E	E	E	G	E	E	F	N	E	G	E	G	E	E	E	E	N	N	N	N	E	G	E	E	E	E
Ethyl Alcohol, pure	E	G	E	E	E	E	E	G	E	G	F	N	E	E	E	E	E	E	E	E	E	E	E	G	E	E	F	N	E	G	E	G	E	E	E	E	N	N	N	N	E	G	E	E	E	E
Ethyl Benzene, pure	N	N	F	N	N	N	N	N	N	N	E	-	E	E	E	E	E	E	G	F	G	F	N	N	N	N	N	N	N	N	N	N	G	F	F	N	-	-	N	N	-	-	N	N	G	N
Ethyl Benzoate, pure	F	F	G	G	G	F	G	F	G	F	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	E	E	F	N	-	-	N	N	-	-	-	-	N	N
Ethyl Butyrate, pure	G	N	G	F	G	N	G	N	F	N	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	E	G	-	-	N	N	N	N	-	-	-	-	N	N
Ethyl Chloride, pure	F	N	N	N	F	N	F	N	F	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	N	N	N	N	E	E
Ethyl Cyanoacetate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	F	N	F	N	N	N	F	F	G	N	E	E	-	-	-	-	N	N	-	-	-	-	N	N
Ethyl Lactate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	F	N	F	N	N	N	F	F	F	N	E	E	-	-	-	-	N	N	-	-	-	-	N	N
Ethylene Chloride, pure	N	N	N	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	N	E	E	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	F	N	N	N	E	E
Ethylene Glycol, pure	E	G	E	E	E	E	E	E	E	E	E	-	E	E	E	E	E	E	E	E	E	E	E	G	E	E	F	N	E	E	E	E	E	E	E	E	G	F	E	E	E	G	E	E	E	E
Ethylene Glycol Monomethyl Ether, pure	E	G	E	E	G	F	E	E	E	E	F	N	E	E	E	E	E	E	E	G	E	E	N	N	F	N	F	N	N	N	N	N	E	E	-	-	-	-	N	N	-	-	-	-	E	E
Ethylene Oxide, 100%	F	F	G	F	F	N	F	F	F	N	G	F	E	E	E	E	E	E	E	E	E	E	F	N	N	N	G	N	E	E	N	N	E	G	F	N	E	E	F	F	-	-	N	N	E	E
Ethylene Oxide, gas	G	G	E	E	E	E	G	G	G	G	G	F	E	E	E	E	E	E	E	E	E	E	E	G	G	E	G	E	E	E	E	G	E	E	F	N	E	E	F	F	-	-	E	E	E	E
Ethylene Oxide, pure	F	F	G	F	F	N	F	F	F	N	G	F	E	E	E	E	E	E	E	E	E	E	F	N	N	N	G	N	E	E	N	N	E	G	F	N	F	N	N	N	-	-	N	N	E	E
EtO, gas	G	G	E	E	E	E	G	G	G	G	G	F	E	E	E	E	E	E	E	E	E	E	E	E	G	G	E	G	E	E	E	G	E	E	F	N	E	E	F	F	-	-	E	E	E	E
EtO, pure	F	F	G	F	F	N	F	F	F	N	G	F	E	E	E	E	E	E	E	E	E	E	F	N	N	N	G	N	E	E	N	N	E	G	F	N	F	N	N	N	-	-	N	N	E	E
Fatty Acids - saturated, pure	G	F	E	E	E	G	E	G	E	G	G	F	E	E	E	E	E	E	E	G	E	E	G	F	E	E	E	G	G	G	E	F	E	E	E	E	-	-	-	-	E	E	E	E	E	E
Fatty Acids - unsaturated, pure	G	F	E	E	E	G	E	G	E	G	G	F	E	E	E	E	E	E	E	G	E	E	G	F	E	E	E	G	G	G	E	F	E	E	E	E	-	-	-	-	E	E	E	E	E	E
Fluorides	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	E	G	G	E	E	E	E	-	-	-	-	-	-	E	E
Fluorine, gas	F	N	G	N	N	N	F	N	F	N	-	-	E	G	E	G	E	G	E	F	G	N	G	F	E	N	F	N	N	N	N	N	G	N	-	-	-	-	N	N	F	N	N	N	G	N
Formaldehyde, 10%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	E	G	G	E	E	G	G	E	G	E	G	E	G	G	N	E	E
Formaldehyde, 40%	E	G	E	G	E	E	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	N	G	F	G	G	E	G	G	G	E	F	F	N	F	N	G	N	E	E
Formalin, 10%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	N	E	E	G	G	E	G	G	G	E	G	E	G	E	G	G	N	E	E
Formalin, 40%	E	G	E	G	E	E	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	N	G	F	G	G	E	G	G	G	E	F	F	N	F	N	G	N	E	E
Formic Acid, 3%	E	G	E	E	E	E	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	N	E	G	E	G	E	E	E	E	E	E	E	-	E	G	E	E	E	E	E	E
Formic Acid, 50%	G	G	E	E	E	G	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	F	E	N	G	F	G	F	G	F	E	E	E	G	-	-	E	G	G	F	E	E	E	E
Formic Acid, 85%	G	G	E	E	E	G	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	N	F	N	G	F	G	F	E	E	E	G	-	-	G	F	G	F	E	E	E	E
Formic Acid, 100%	G	G	E	E	E	G	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	N	N	N	G	F	G	F	E	E	E	G	N	N	N	N	G	F	E	E	E	E
Formic Acid, pure	G	G	E	E	E	G	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	N	N	N	F	F	G	F	E	E	E	G	N	N	N	N	G	F	E	E	E	E
Freon TF, pure	E	G	E	G	E	G	E	G	F	N	-	-	E	E	E	E	E	E	E	G	E	G	G	N	G	F	N	N	G	F	F	N	E	E	F	N	-	-	F	N	E	-	-	-	E	E
Fuel Oil	F	N	G	F	E	F	E	G	G	F	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	E	N	N	E	G	F	N	E	G	G	F	-	-	E	G	E	-	G	N	E	E
Gasoline	N	N	F	N	F	N	N	N	G	F	G	-	E	E	E	E	E	E	E	E	E	E	F	N	G	N	N	N	F	F	N	N	G	F	F	N	N	N	F	N	G	G	G	N	E	E
Glutaraldehyde, pure	E	G	E	E	E	E	E	E	F	F	G	-	E	E	E	E	E	E	E	G	E	G	E	F	E	E	F	N	G	G	E	F	E	E	G	G	G	-	-	-	E	E	-	-	E	E
Glutaraldehyde Disinfectant	E	G	E	E	E	E	E	E	F	F	-	-	E	E	E	E	E	E	E	G	E	G	E	F	E	E	F	N	G	G	E	F	E	E	E	G	G	F	-	-	E	E	-	-	E	E
Glycerine, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	E	E	E	E	E	E	E	E	E	-	E	E	E	G	E	E	E	E
Glycerol, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	E	E	E	E	E	E	E	E	E	-	E	E	E	G	E	E	E	E
Hexane, pure	N	N	G	F	G	F	F	N	F	N	G	-	E	E	E	E	E	E	E	G	E	E	F	N	E	N	N	N	E	G	N	N	E	G	G	F	E	-	E	E	E	F	G	N	E	E
Hydrazine, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	G	F	G	N	N	N	N	N	N	N	N	N	-	-	-	-	-	-	-	-	-	-	-	-	E	N	E	E
Hydrobromic Acid, 69%	E	E	E	G	E	G	-	-	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	G	N	E	G	F	F	E	G	-	-	N	N	G	G	G	F	E	E	E	E
Hydrochloric Acid, 5%	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E
Hydrochloric Acid, 20%	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	G	F	E	E	E	E	E	E	E	E	G	-	E	E	E	G	E	E	E	E
Hydrochloric Acid, 35%	E	E	E	E	E	G	E	G	E	G	G	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	F	N	E	E	E	E	E	E	E	E	N	N	E	G	G	F	E	E	E	E
Hydrofluoric Acid, 4%	E	E	E	E	E	E	E	G	E	E	F	N	E	E	E	E	E	E	E	E	E	E	G	G	E	E	G	F	G	F	G	F	E	E	G	F	G	-	-	-	G	F	E	E	E	E
Hydrofluoric Acid, 48%	E	E	E	E	E	G	E	E	E	G	N	N	E	E	E	E	E	E	E	E	E	E	F	N	G	F	F	N	F	N	N	N	E	E	N	N	N	N	E	G	G	F	E	E	E	E
Hydrogen Peroxide, 3%	E	E	E	E	E	G	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	G	E	E	E	G	E	-	E	E	G	F	E	E	E	E

E - No damage after 30 days of constant exposure.

G - Little or no damage after 30 days of constant exposure.

F - Some effect after 7 days of constant exposure.

N - Immediate damage may occur. Not recommended for continuous use.

CHEMICAL	LDPE		HDPE		PP		PPCO		PMP		PETG		FEP		TFE		PFA		ECTFE		ETFE		PC		Rigid PVC		Flex. PVC		PSF		PS		FLPE		RESMER		PMMA		SAN		PEI		XLPE		PVDF	
	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°
Hydrogen Peroxide, 30%	E	G	E	E	E	F	E	G	E	G	G	-	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	N	E	E	E	G	F	N	E	E	N	N	E	E	E	E	E	E
Hydrogen Peroxide, 90%	E	N	E	E	E	F	E	G	E	G	G	-	E	E	E	E	E	E	E	E	E	F	E	E	E	G	N	N	E	E	E	G	E	E	E	G	N	N	E	E	N	N	F	F	G	N
Iodine Crystals, pure	N	N	N	N	E	E	F	N	G	N	-	-	E	E	E	E	E	E	E	E	E	G	G	N	N	N	N	N	N	N	G	F	N	N	E	G	-	-	N	N	F	N	N	N	E	E
Isobutanol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	F	G	N	E	G	G	G	E	E	E	E	N	N	G	N	-	-	E	E	E	E
iso-Butyl Alcohol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	F	G	N	E	G	G	G	E	E	E	E	N	N	G	N	-	-	E	E	E	E
Isopropanol, 100%	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	N	G	F	E	G	E	E	E	E	N	N	E	F	E	E	E	E	E	E
Isopropanol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	N	G	F	E	G	E	E	E	E	N	N	E	F	E	E	E	E	E	E
iso-Propanol, 100%	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	N	G	F	E	G	E	E	E	E	N	N	E	F	E	E	E	E	E	E
Isopropyl Acetate, pure	G	F	E	G	G	F	G	F	G	F	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	E	E	-	-	-	-	N	N	G	F	-	-	G	N
Isopropyl Alcohol, 100%	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	N	G	F	E	G	E	E	E	E	N	N	E	F	E	E	E	E	E	E
Isopropyl Alcohol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	N	G	F	E	G	E	E	E	E	N	N	E	F	E	E	E	E	E	E
Isopropyl Benzene, pure	F	N	F	N	F	N	F	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	G	F	F	N	-	-	N	N	-	-	-	-	-	-
Isopropyl Ether, pure	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	G	F	-	-	-	-	-	-	-	-	-	-	E	G
Jet Fuel	F	N	F	N	F	N	F	N	F	N	-	-	E	E	E	E	E	E	E	E	E	E	G	N	E	G	N	N	G	F	G	F	G	F	G	F	-	-	-	-	E	-	-	-	E	E
Kerosene	F	N	F	N	F	N	N	N	G	F	G	-	E	E	E	E	E	E	E	E	G	F	E	-	E	E	N	N	G	F	N	N	G	F	G	F	E	F	-	-	G	F	F	N	E	E
Lacquer Thinner	N	N	F	N	F	N	F	N	F	F	N	N	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	G	F	G	F	N	N	-	-	-	-	-	-	E	E
Lactic Acid, 3%	E	G	E	E	E	E	E	G	E	G	F	N	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G
Lactic Acid, 85%	E	G	E	E	E	G	E	G	E	G	N	N	E	E	E	E	E	E	E	E	E	E	E	G	E	F	G	F	E	E	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E	G
Lead Acetate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	N	E	E	E	E	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Magnesium Chloride, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	N	E	E	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E
MEK, pure	N	N	N	N	E	G	E	G	F	N	G	-	E	E	E	E	E	E	G	F	E	G	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	G	N	N	N	N	N
Mercuric Chloride, pure	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	E	E	E	E	N	N	-	-	G	G	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Methanol, 100%	E	G	E	E	E	E	E	E	E	G	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	F	N	E	G	G	F	E	E	E	G	N	N	N	N	E	G	E	E	E	E
Methoxyethyl Oleate, pure	E	G	E	E	E	G	E	G	E	G	G	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	N	N	N	N	N	N	E	E	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Acetate, pure	F	N	F	F	G	F	G	F	E	E	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	G	G	-	-	-	-	-	-	G	F	-	-	E	N
Methyl Alcohol, 100%	E	G	E	E	E	E	E	E	E	G	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	F	N	E	G	G	F	E	E	E	G	N	N	N	N	E	G	E	E	E	E
Methyl Alcohol, pure	E	G	E	E	E	E	E	E	E	G	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	F	N	E	G	G	F	E	E	E	G	N	N	N	N	E	G	E	E	E	E
Methyl Ethyl Ketone, pure	N	N	N	N	E	G	E	G	F	N	G	-	E	E	E	E	E	E	G	F	E	G	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	G	N	N	N	N	N
Methyl Isobutyl Ketone, pure	N	N	N	N	G	F	G	F	F	F	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	-	-	-	-	N	N
Methyl Propyl Ketone, pure	N	N	F	N	G	F	G	F	F	F	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	G	F	F	N	-	-	N	N	-	-	-	-	N	N
Methylene Chloride, pure	N	N	F	N	F	N	F	N	F	N	N	N	E	E	E	E	E	E	F	N	G	N	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	N	N	N	N	E	G
Methyl-t-Butyl Ether, pure	N	N	F	N	F	N	F	N	E	E	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	G	F	-	-	-	-	-	-	-	-	-	-	E	E
MIBK, pure	N	N	N	N	G	F	G	F	F	F	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	-	-	-	-	N	N
Mineral Oil	G	N	E	E	E	F	E	E	E	G	G	N	E	E	E	E	E	E	E	E	E	E	E	E	E	N	F	N	E	E	E	E	E	E	E	E	E	N	E	E	E	G	G	N	E	E
Mineral Spirits	F	N	F	N	F	N	F	N	E	E	G	-	E	E	E	E	E	E	E	G	E	G	F	F	G	N	N	N	F	N	F	F	G	F	G	F	-	-	G	F	-	-	-	-	E	E
n-Amyl Acetate, pure	G	F	E	G	G	F	G	F	G	F	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	E	E	-	-	N	N	N	N	-	-	N	N	E	G
n-Butanol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	F	G	F	F	N	G	F	E	G	E	E	E	E	N	N	E	N	E	G	E	E	E	E
n-Butyl Acetate, pure	G	F	G	F	G	F	G	F	G	F	-	-	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	E	G	-	-	-	-	N	N	-	-	N	N	G	N
n-Butyl Alcohol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	F	G	F	F	N	G	F	E	G	E	E	E	E	N	N	E	N	E	G	E	E	E	E
n-Decane, pure	F	N	F	N	F	N	F	N	F	N	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	G	F	N	G	F	F	N	G	F	G	F	-	-	-	-	-	-	-	-	E	E
n-Heptane, pure	N	N	F	F	F	F	F	F	F	F	E	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	N	N	E	G	N	N	G	G	G	F	E	-	E	E	G	N	G	N	E	E
Nitric Acid, 10%	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	F	F	N	G	N	E	E	G	N	E	-	G	G	E	N	E	E	E	E
Nitric Acid, 20%	E	E	G	G	F	F	G	F	E	E	G	-	E	E	E	E	E	E	E	E	E	E	E	G	E	E	G	N	F	N	G	N	G	G	G	N	E	-	G	G	G	N	E	E	E	G
Nitric Acid, 50%	G	F	F	N	F	N	F	N	F	N	G	-	E	E	E	E	E	E	E	E	E	E	G	F	G	F	F	N	F	N	F	N	F	N	F	N	N	N	N	N	E	G	E	G	E	G
Nitric Acid, 70%	F	N	F	N	N	N	N	N	F	N	N	N	E	E	E	E	E	E	E	E	E	G	G	N	N	N	N	N	F	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	E	G
Nitrobenzene, pure	N	N	N	N	N	N	N	N	F	N	N	N	E	E	E	E	E	E	E	G	E	G	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	-	-	N	N	G	N
Nitromethane, pure	N	N	F	N	F	N	F	N	E	F	N	N	E	E	E	E	E	E	E	F	E	G	F	N	N	N	N	N	N	N	N	N	F	N	E	E	-	-	-	-	E	-	-	-	E	G
n-Octane, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	F	-	-	N	N	G	F	N	N	E	E	G	F	-	-	N	N	E	-	E	E	E	E
o-Dichlorobenzene, pure	F	N	N	N	F	N	F	N	F	N	N	N	E	E	E	E	E	E	E	N	E	F	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	-	-	-	-	E	E

E - No damage after 30 days of constant exposure.

G - Little or no damage after 30 days of constant exposure.

F - Some effect after 7 days of constant exposure.

N - Immediate damage may occur. Not recommended for continuous use.

CHEMICAL	LDPE		HDPE		PP		PPCO		PMP		PETG		FEP		TFE		PFA		ECTFE		ETFE		PC		Rigid PVC		Flex. PVC		PSF		PS		FLPE		RESMER		PMMA		SAN		PEI		XLPE		PVDF	
	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°
Oil, Cedarwood	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	G	F	-	-	N	N	F	F	N	N	-	-	E	E	-	-	G	F	E	E	G	N	E	E
Oil, Cinnamon	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	G	G	F	N	N	N	N	F	F	N	N	-	-	E	E	-	-	N	N	E	E	G	N	-	-
Oil, Mineral	G	N	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	G	E	G	E	G	G	N	E	G	E	E	E	E	E	E	E	N	E	E	E	E	G	N	E	E
Oil, Pine	G	N	F	N	E	G	E	G	G	F	-	-	E	E	E	E	E	E	E	G	E	G	G	F	F	N	N	N	F	F	N	N	E	G	E	E	-	-	N	N	E	E	G	N	E	E
Orange Oil	F	N	G	F	G	F	G	F	F	F	-	-	E	E	E	E	E	E	E	E	E	E	F	F	F	N	N	N	F	F	N	N	E	G	F	N	-	-	G	F	-	-	-	-	E	E
Oxalic Acid, 10%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	N	E	E	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	G
Ozone, pure	G	N	G	N	F	N	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	E	G	G	F	E	E	F	F	G	N	F	F	E	-	G	G	G	G	N	N	E	E
p-Chloroacetophenone, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	N	N	N	N	N	N	N	N	N	E	E	F	N	-	-	-	-	-	-	-	-	N	N
p-Dichlorobenzene, pure	F	N	N	N	G	F	G	F	G	F	N	N	E	E	E	E	E	E	E	N	E	F	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	-	-	-	-	E	E
Perchloric Acid, 70%	G	N	G	N	G	N	G	N	G	N	-	-	E	E	G	F	E	E	E	G	E	G	N	N	G	N	N	N	N	N	G	F	G	N	G	F	E	E	G	G	F	F	N	N	E	G
Perchloric Acid, concentrated	G	N	G	N	G	N	G	N	G	N	-	-	G	F	G	F	G	F	G	F	G	F	N	N	G	N	N	N	N	N	G	F	G	N	G	F	E	E	G	G	F	F	N	N	E	G
Perchloric Acid, pure	G	N	G	N	G	N	G	N	G	N	-	-	G	F	G	F	G	F	G	F	G	F	N	N	G	N	N	N	N	N	G	F	G	N	G	F	E	E	G	G	F	F	N	N	E	G
Perchloroethylene, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	G	E	E	N	N	N	N	N	N	N	N	N	N	F	F	F	N	F	N	E	G	E	-	N	N	E	E
Petroleum	N	N	G	N	N	N	N	N	G	F	-	-	E	E	E	E	E	E	E	E	E	E	F	F	G	N	N	N	F	N	N	N	E	F	F	N	-	-	-	-	E	E	N	N	E	E
Phenol, 50%	N	N	N	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	G	E	E	N	N	N	N	N	N	N	N	N	N	F	F	N	N	N	N	N	N	F	N	N	N	E	G
Phenol, 100%	N	N	N	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	G	E	F	N	N	N	N	N	N	N	N	N	N	F	F	N	N	N	N	N	N	N	N	N	N	E	G
Phenol, Crystal	F	N	G	F	G	N	G	N	F	G	N	N	E	E	E	E	E	E	E	E	E	E	N	N	F	N	F	N	F	F	N	N	E	E	N	N	N	N	N	N	N	N	N	N	E	G
Phenol, liquid	N	N	N	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	G	E	F	N	N	N	N	N	N	N	N	N	N	F	F	N	N	N	N	N	N	N	N	N	N	E	G
Phosphoric Acid, 5%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E	E	E	E	F	E	E	E	E	E	E	E	E
Phosphoric Acid, 85%	E	N	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	G	F	E	E	E	G	E	E	E	G	F	N	E	E	G	F	E	E	E	E
Picric Acid, pure	N	N	N	N	N	N	N	N	E	E	-	-	E	E	E	E	E	E	G	F	G	F	N	N	N	N	N	N	N	N	G	F	N	N	G	F	-	-	E	E	-	-	G	N	G	N
Pine Oil, pure	G	N	F	N	E	G	E	G	G	F	-	-	E	E	E	E	E	E	E	E	E	E	G	F	F	N	N	N	F	N	N	N	E	E	-	-	N	N	E	E	E	-	-	-	E	E
Potassium Chloride, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E	E	E	-	-	E	E	E	G	E	E	E	E
Potassium Hydroxide, 1%	E	E	F	F	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	G	E	E	E	G	N	N	E	G	E	-	E	E	E	G	E	E	E	E
Potassium Hydroxide, 30%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	N	N	E	E	G	N	E	G	G	G	F	F	E	G	E	-	E	E	G	F	E	E	E	G
Potassium Hydroxide, concentrated	E	E	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	G	F	N	E	F	G	G	F	F	E	G	E	N	E	G	G	F	E	E	E	G
Potassium Permanganate, pure	E	E	E	E	E	G	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	F	G	N	E	E	E	G	E	E	E	E	F	N	G	F	-	-	E	E	E	E
Propane, gas	N	N	E	E	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	F	N	E	G	F	N	F	F	N	N	E	E	G	F	-	-	E	E	-	-	-	-	E	E
Proprionic Acid, pure	F	N	E	F	E	G	E	G	E	F	-	-	E	E	E	E	E	E	E	F	E	G	N	N	G	N	F	N	G	G	G	N	E	F	E	G	-	-	-	-	E	E	-	-	E	E
Propylene Glycol, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	F	F	N	G	N	G	G	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E
Propylene Oxide, pure	E	G	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	N	N	E	F	G	F	F	N	F	N	G	G	N	N	E	E	F	N	-	-	N	N	-	-	-	-	N	N
Pyridine, pure	N	N	N	N	E	E	N	N	F	N	-	-	E	E	E	E	E	E	N	N	E	G	N	N	N	N	N	N	N	N	N	N	N	N	F	N	N	N	N	N	-	-	E	N	N	N
Resorcinol, 5%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	F	G	F	G	N	N	N	N	N	G	F	E	E	G	G	-	-	G	G	-	-	E	E	E	E
Resorcinol, saturated	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	F	F	N	N	N	N	N	G	F	E	E	G	G	-	-	G	N	-	-	E	E	E	E
Salicylaldehyde, pure	E	G	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	N	E	G	G	F	F	N	N	N	F	F	N	N	E	E	F	N	-	-	N	N	-	-	-	-	E	G
Salicylic Acid, powder	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	G	F	G	F	E	E	E	E	E	E	E	E	-	-	E	G	-	-	E	E	E	E
Salicylic Acid, saturated	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	G	F	G	F	E	E	E	G	E	E	E	E	-	-	E	G	-	-	E	E	E	E
sec-Butanol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	G	N	E	G	G	G	E	E	E	E	-	-	G	N	-	-	E	E	E	E
sec-Butyl Alcohol, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	G	N	E	G	G	G	E	E	E	E	N	N	G	N	-	-	E	E	E	E
Silicone Oil, pure	E	G	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	E	E	E	G	E	E	E	E	F	N	E	E	E	E	-	-	E	E
Silver Acetate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	G	G	G	N	E	E	G	G	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Silver Nitrate, pure	E	G	E	E	E	E	E	G	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	G	E	E	E	E	E	E	E	E	-	-	E	G	-	-	E	E	E	E
Skydrol LD4 Aviation Hydraulic Fluid	G	F	E	G	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	E	G	F	N	-	-	-	-	F	N	-	-	E	F
Sodium Acetate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	G	F	G	N	E	E	E	E	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Sodium Carbonate, pure	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	G	N	E	G	E	G	F	F	E	G	G	N	E	E	-	-	E	E	E	E
Sodium Dichromate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	N	E	E	E	E	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Sodium Hydroxide, 1%	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	F	E	E	E	E	N	N	E	G	E	E	E	E	E	G	E	E	E	E

E - No damage after 30 days of constant exposure.

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CHEMICAL	LDPE		HDPE		PP		PPCO		PMP		PETG		FEP		TFE		PFA		ECTFE		ETFE		PC		Rigid PVC		Flex. PVC		PSF		PS		FLPE		RESMER		PMMA		SAN		PEI		XLPE		PVDF	
	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°	20°	50°
Sodium Hydroxide, 10%	E	E	E	E	E	E	E	E	E	E	G	-	E	E	E	E	E	E	E	E	E	E	N	N	E	E	G	N	E	G	E	E	F	F	E	G	E	E	E	E	E	G	E	E
Sodium Hydroxide, 50%	G	G	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	G	F	N	E	G	E	G	G	F	E	G	E	N	E	G	G	F	E	E	N	N
Sodium Hydroxide, concentrated	G	G	E	E	E	E	E	E	E	E	N	N	E	E	E	E	E	E	E	E	E	E	N	N	E	G	F	N	E	G	E	G	F	F	E	G	E	N	E	G	G	F	E	E	N	N
Sodium Hypochlorite, 15%	E	F	E	G	F	N	G	N	E	E	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	E	F	N	E	E	E	G	F	F	E	G	E	E	E	E	E	G	E	E	E	E
Stearic Acid, pure	E	E	G	G	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	E	G	G	G	E	G	G	G	E	G	-	-	E	G	E	E	E	E	E	E
Sulfur Dioxide, dry gas	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	G	N	G	G	F	N	E	E	F	N	G	N	F	F	-	-	G	N	E	E
Sulfur Dioxide, liquid (46 psig)	N	N	F	N	E	E	N	N	N	N	-	-	E	E	E	E	E	E	E	E	E	G	G	N	F	N	N	N	G	G	N	N	F	N	F	N	N	N	F	F	-	-	F	N	E	E
Sulfur Dioxide, wet gas	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	G	N	G	G	F	N	E	E	F	N	N	N	F	F	-	-	G	N	E	E
Sulfur Dioxide, pure	N	N	F	N	E	E	N	N	N	N	-	-	E	E	E	E	E	E	E	E	E	G	G	N	F	N	N	N	G	G	N	N	F	N	F	N	N	N	F	F	-	-	F	N	E	E
Sulfur Salts, pure	F	N	G	F	F	N	F	N	F	N	-	-	E	E	E	E	E	E	E	E	E	G	F	N	N	N	G	N	G	G	N	N	G	F	-	-	-	-	N	N	-	-	-	-	F	N
Sulfuric Acid, 6%	E	E	E	E	E	E	E	E	E	E	E	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Sulfuric Acid, 20%	E	E	E	E	E	E	E	G	E	E	E	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	E	F	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E
Sulfuric Acid, 30%	E	E	E	E	E	E	E	G	E	E	G	-	E	E	E	E	E	E	E	E	E	E	G	F	E	G	F	N	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E
Sulfuric Acid, 60%	E	G	E	G	G	F	G	F	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	F	E	G	F	N	E	E	E	G	E	G	E	G	N	N	N	N	F	N	G	F	E	E
Sulfuric Acid, 96%	G	G	F	N	F	N	F	N	G	F	N	N	E	E	E	E	E	E	E	E	E	E	N	N	F	N	N	N	G	N	F	F	F	N	F	F	N	N	N	N	N	N	F	N	E	E
Sulfuric Acid, 98%	G	G	F	N	F	N	F	N	G	F	N	N	E	E	E	E	E	E	E	E	E	G	N	N	F	N	N	N	G	N	F	F	F	N	F	F	N	N	N	N	N	N	F	N	E	G
Sulfuric Acid, concentrated	G	G	F	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	E	E	E	G	N	N	G	N	N	N	N	N	N	N	F	N	N	N	N	N	N	N	N	N	F	N	N	N
Tartaric Acid, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	E	G	E	G	E	E	E	G	E	E	E	G	E	E	E	E	E	E	E	E	E	E
TCA, pure	F	N	F	N	G	F	F	N	E	E	-	-	E	E	E	E	E	E	E	F	E	G	F	N	F	N	F	N	G	G	F	N	F	N	F	N	-	-	N	N	-	-	E	G	E	G
tert-Butanol, pure	E	G	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	F	G	G	F	N	G	F	G	G	E	E	E	E	-	-	E	E	-	-	-	-	E	E
tert-Butyl Alcohol, pure	E	G	E	E	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	F	G	G	F	N	G	F	G	G	E	E	E	E	-	-	E	E	-	-	-	-	E	E
Tetrahydrofuran, pure	F	N	F	N	G	F	G	F	F	F	-	-	E	E	E	E	E	E	N	N	G	F	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	-	-	N	N	N	N
THF, pure	F	N	F	N	G	F	G	F	F	F	-	-	E	E	E	E	E	E	N	N	G	F	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	-	-	N	N	N	N
Thionyl Chloride, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	N	N	N	N	N	N	N	N	N	N	N	N	-	-	-	-	-	-	-	-	N	N	N	N
Tincture of Iodine	E	G	G	F	E	E	G	N	N	N	-	-	E	E	E	E	E	E	E	E	E	E	G	N	N	N	G	F	-	-	G	F	G	F	E	G	N	N	-	-	E	F	N	N	E	G
Toluene, pure	F	N	N	N	N	N	N	N	F	F	N	N	E	E	E	E	E	E	E	G	E	E	N	N	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	F	N	N	N	E	E
Tributyl Citrate, pure	G	F	E	G	G	F	G	F	G	F	-	-	E	E	E	E	E	E	E	G	E	G	N	N	E	N	N	N	F	F	N	N	E	G	E	E	-	-	-	-	-	-	-	-	E	F
Trichloroacetic Acid, pure	F	N	F	N	G	F	F	N	E	E	-	-	E	E	E	E	E	E	E	F	E	G	F	N	F	N	F	N	G	G	F	N	F	N	F	N	-	-	N	N	-	-	E	G	E	G
Trichloroethane, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	E	E	G	N	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	N	N	-	-	E	E
Trichloroethylene, pure	N	N	N	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	N	N	E	E	N	N	N	N	N	N	N	N	N	N	F	F	F	N	N	N	N	N	N	N	N	N	E	E
Triethylene Glycol, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	G	F	F	N	E	E	E	G	E	E	E	E	-	-	E	E	E	E	-	-	-	-
Tripropylene Glycol, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	G	G	F	F	N	E	E	E	E	E	E	E	E	-	-	-	-	E	E	-	-	-	-
Tris Buffer Solution, pH 11	E	G	E	G	E	G	E	G	E	G	F	N	E	E	E	E	E	E	E	E	E	E	F	N	E	E	E	G	G	F	G	N	E	G	E	E	E	E	E	E	E	E	E	E	E	E
Tris Buffer Solution, pH 7.0	E	G	E	G	E	G	E	G	E	G	G	G	E	E	E	E	E	E	E	E	E	E	G	F	E	E	E	G	G	F	G	N	E	G	E	E	E	E	E	E	E	E	E	E	E	E
Trisodium Phosphate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	G	N	E	E	G	N	G	F	E	E	F	F	E	G	G	N	E	E	-	-	E	E	E	E
Turpentine	F	N	F	N	F	N	N	N	F	N	G	-	E	E	E	E	E	E	E	E	E	E	F	N	G	F	F	N	N	N	N	N	G	F	N	N	G	N	G	N	N	N	N	N	E	E
Undecyl Alcohol, pure	E	F	E	G	E	G	E	G	E	G	-	-	E	E	E	E	E	E	E	G	E	G	G	F	E	F	G	F	F	F	G	G	E	E	E	E	-	-	E	E	-	-	-	-	E	E
Urea, pure	E	E	E	E	E	E	E	E	E	G	-	-	E	E	E	E	E	E	E	E	E	E	G	F	G	N	G	N	F	F	E	G	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Vinylidene Chloride, pure	N	N	F	N	N	N	N	N	N	N	-	-	E	E	E	E	E	E	G	F	G	F	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	-	-	-	-	E	E
Xylene, pure	N	N	F	N	N	N	F	N	F	N	-	-	E	E	E	E	E	E	E	E	E	G	N	N	N	N	N	N	N	N	N	N	G	F	F	N	N	N	N	N	F	N	N	N	E	E
Zinc Chloride, 10%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	N	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Zinc Stearate, pure	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	N	E	E	E	E	E	E	E	E	-	-	E	E	-	-	E	E	E	E
Zinc Sulfate, 10%	E	E	E	E	E	E	E	E	E	E	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	N	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E

E - No damage after 30 days of constant exposure.

G - Little or no damage after 30 days of constant exposure.

F - Some effect after 7 days of constant exposure.

N - Immediate damage may occur. Not recommended for continuous use.

Resin	Max. Use Temp. (°C)[2]	HDT[1] Temp. (°C)	Brittle-ness Temp. (°C)[13]	Transparency	Microwav-ability	Auto-claving[4]	Sterilization[4]				Specific Gravity	Flexibility	Permeability (cc.-mil/100in²-24 hr.-atm)		
							Gas	Dry Heat	Radi-ation	Disin-fectants			N_2	O_2	CO_2
LDPE	80	45	−100	Translucent	Yes	No	Yes	No	Yes	Yes	0.92	Excellent	180	500	2,700
HDPE	120	65	−100	Translucent	No	No	Yes	No	Yes	Yes	0.95	Rigid	42	185	580
PP	135	107	0	Translucent	Yes	Yes	Yes	No	No	Yes	0.9	Rigid	48	240	800
PPCO	121	90	−40	Translucent	Marginal[3]	Yes	Yes	No	No	Yes	0.9	Moderate	45	200	650
PMP	145	80	20	Clear	Yes	Yes	Yes	Yes	No	Yes	0.83	Rigid	8,000	32,000	115,000
FLPE	120	65	−100	Translucent	No	No	Yes	No	Yes	Yes	0.95	Rigid	42	185	580
ECTFE	150	90	−76	Translucent	Yes	Yes	Yes	Yes	Yes	Yes	1.69	Rigid	10	25	110
ETFE	150	104	−105	Translucent	Yes	Yes	Yes	Yes	Yes	Yes	1.7	Rigid	30	100	250
FEP	205	70	−270	Translucent	Marginal[3]	Yes	Yes	Yes	No	Yes	2.15	Excellent	320	750	2,200
PFA	260	166	−270	Translucent	Yes	Yes	Yes	Yes	No	Yes	2.15	Excellent	291	881	2,260
PTFE/TFE	260	200	−100	Opaque	Yes	Yes	Yes	Yes	No	Yes	2.2	Rigid	—	307.5	—
PETG	70	70	−40	Clear	Marginal[3]	No	Yes	No	Yes	Some	1.27	Moderate	10	25	125
PC	135	138	−135	Clear	Marginal[3]	Yes[5]	Yes	No	Yes	Yes	1.2	Rigid	50	300	1,075
PSF	165	174	−100	Clear	Yes	Yes	Yes	Yes[5]	Yes	Yes	1.24	Rigid	55	300	700
PS	90	96	20	Clear	No	No	Yes	No	Yes	Some	1.05	Rigid	20-25	300–400	1,000–1,500
PVC (rigid)	70	90	−30	Clear	Yes	No	Yes	No	No	Yes	1.34	Rigid	2–20	4	4
PVC (tubing)	82	−32	−32	Clear	Yes[14]	Yes[14]	Yes	No	No	Yes	1.34	Excellent	8.3–33.3	16.7–100.1	166.8–583.8
ResMer™	130–150	200–300	20	Opaque	Marginal[3]	Yes	Yes	No	Yes	Some	1.32	Rigid	—	—	—
PEI	171	210	<20	Clear Amber	Yes	Yes	Yes	Yes	Yes	Yes	1.28	Rigid	19	37	171
PMMA	50	93	20	Clear	No	No	No	No	Yes	Some	1.2	Rigid	2.78	12.4	68
PUR	82–115	32–68	<−40–<−94	Clear	No	No	Yes	No	Yes	Yes	1.2	Excellent	41–119	75–327	450–1,650
PVDF	150	139	−62	Translucent	Marginal[3]	Yes	Yes	No	No	Yes	1.78	Rigid	9	14	505
XLPE	65	59	−118	Translucent	No	No	Yes	No	Yes	Yes	0.93	Rigid	42.00	185	580
TPE	121	<23	<−50	Opaque	Yes	Yes	Yes	No	Yes	Some	0.93	Excellent	31–145	85–646	900–8,634
EPR	145	<20	−90	Opaque	Yes	Yes	Yes	No	No	Some	0.86	Excellent	25–150	75–650	800–8,000
SAN	85	98	20	Clear	Yes	No	Yes	No	Yes	No	1.07	Rigid	—	—	—
Silicone (gasket)	204	−46	−68	Opaque	Yes	Yes	Yes	Yes	Yes	Yes	1.1–1.15	Excellent	—	—	—

1. Heat Deflection Temperature is the temperature at which a bar deflects 0.01" at 66 psig (ASTM D648). Materials may be used above Heat Deflection temperatures in non-stress applications; see Max. Use Temp.
2. Ratings based on 5-minute tests using 600 watts of power on exposed, empty labware. CAUTION: Do not exceed Max. Use Temp., or expose labware to chemicals which heating cause to attack the plastic or be rapidly absorbed.
3. Plastic will absorb heat.
4. STERILIZATION
   - Autoclaving (121°C, 15 psig for 20 minutes)—Clean and rinse items with distilled water before autoclaving. (**Always completely disengage thread before autoclaving.**) Certain chemicals which have no appreciable effect on resins at room temperature may cause deterioration at autoclaving temperatures unless removed with distilled water beforehand.
   - Gas—Ethylene Oxide, formaldehyde, hydrogen peroxide.
   - Dry Heat (160°C, 120 minutes)
   - Disinfectants—Benzalkonium chloride, formalin/formaldehyde, ethanol, etc.
   - Radiation—gamma irradiation at 25 kGy (2.5 MRad) with unstabilized plastic.
5. Sterilizing reduces mechanical strength. Do not use PC vessels for vacuum applications if they have been autoclaved. Refer to Use and Care Guidelines for NALGENE Labware, for detailed information on sterilizing.
6. "Yes" indicates the resin has been determined to be non-cytotoxic, based on USP and ASTM biocompatibility testing standards utilizing an MEM elution technique on a WI38 human diploid lung cell line.
7. Resins meet requirements of CFR21 section of Food Additives Amendment of the Federal Food and Drug Act. End users are responsible for validation of compliance for specific containers used in conjunction with their particular packaging applications.
8. Acceptable for aqueous foods only, at temperatures up to 121°C/250°F. Not sanctioned for use with alcoholic or fatty foods at any temperature.
9. Acceptable for:
   - Nonacid, aqueous products; may contain salt, sugar or both (pH above 5.0).
   - Dairy products and modifications; oil-in-water emulsions, high or low fat.
   - Moist bakery products with surface containing no free fat or oil.
   - Dry solids with the surfaces containing no free fat or oil (no end-test required) and under all conditions as described in Table 2 of FDA Regulation 177.1520 except condition A—high temperature sterilization (e.g. over 100°C/212°F).
10. Acceptable for:
    - Alcoholic foods containing not more than 15% (by volume) alcohol; fill and storage temperature not to exceed 49°C (120°F).
    - Non-alcoholic foods of hot fill to not exceed 82°C (180°F) and 49°C (120°F) in storage.
    - Not suitable for carbonated beverages or beer or packaging food requiring thermal processing.
11. Straight-sided jars, beakers and graduated cylinders only.
12. Acceptable for aqueous, oil, dairy, acidic, and alcoholic foods up to 71° C/160° F.
13. The brittleness temperature is the temperature at which an item made from the resin may break or cracked if dropped. This is not the lowest use temperature if care is exercised in use and handling.
14. The tubing will become opaque from absorbed water, see the current NALGENE® Labware catalog for details.
15. WVTR = Water Vapor Transmission rate in g-mm/m² - 24 hr. - 1 BAR at 37°C and 90% Relative Humidity.

Resin	Permeability (cc.-mm/m²-24 hr.-Bar) N_2	O_2	CO_2	Water Vapor Transmission Rate (g-mm/m²-24 hr.-Bar at 38°C, 90% RH)[15]	Water Absorption (%)	Non-Cytotoxicity[6]	Suitability for Food and Bev. Use[7]	Reg. Part 21 CFR	Refractive Index	Melting Point Range (°C)	Glass Transition Temperature Range (°C)
LDPE	180	500	2,700	15.5–23.3	<0.01	Yes	Yes[9]	177.1520	1.5400	85 to 125	–25
HDPE	42	185	580	4.6–6.2	<0.01	Yes	Yes[9]	177.1520	1.5100	125 to 138	–25
PP	18.65	93.25	310.84	3.9	<0.02	Yes	Yes	177.1520	1.4735	160 to 176	–20 to –5
PPCO	17.48	77.71	252.56	4.40	<0.02	Yes	Yes	177.1520	1.4735–1.5100	150 to 175	–20
PMP	3,109.42	12,433.68	44,683.32	775	0.01	Yes	Yes[11]	177.1520	1.4630	235	N/A
FLPE	16.32	71.88	225.36	4.6	<0.01	Yes	Yes[9]	177.1615	1.5100	125–138	–125
ECTFE	3.89	9.71	42.74	3.15	0.01	Yes	Yes	177.1380	1.4200	242	85
ETFE	11.66	38.86	97.14	1.65	0.03	Yes	Yes	177.1550	1.3580	265	N/A
FEP	124.34	291.41	854.82	6.20	<0.01	Yes	Yes	177.1550	1.3380	275	N/A
PFA	118.07	342.31	878.13	2.00	<0.02	Yes	Yes	177.1550	1.3580	302 to 310	N/A
PTFE/TFE	—	117.48	—	4.0	<0.01	Yes	Yes	177.1550	1.3500	320 to 330	120 to 130
PETG	3.89	9.71	48.57	18.13	0.13	Yes	Yes[10]	177.1315	1.57	265	81
PC	19.43	116.57	417.69	115	0.35	Yes	Yes	177.1580	1.5860	N/A	154
PSF	21.37	116.57	271.99	—	0.3	Yes	Yes	177.1655	1.6330	N/A	185 to 195
PS	7.77–9.71	16.57–155.42	88.55–582.83	1.220.47–6,102.35	0.05	Yes	Yes	177.1640	1.5894	N/A	74 to 110
PVC (rigid)	0.78–7.77	1.55	1.55	0.90–5.1	0.15–0.75	Yes	Yes[12]	176.180/175.3	1.5390	N/A	75 to 105
PVC (tubing)	3.22–12.94	2.60–38.89	64.81–226.84	15–80	0.15–0.75	Yes	Yes[12]	176.180/175.3	1.5390	N/A	75 to 105
ResMer™	—	—	—	—	0.01	—	—	—	—	270	100
PEI	7.23	14.38	66.56	0.37	0.25	—	Yes	177.1595	1.4600	N/A	215
PMMA	1.08	4.80	26.40	55.20	0.35	Yes	Yes	177.1010	1.4893	85 to 105	N/A
PUR	15.93–46.24	29.14–127.06	74.85–641.11	—	0.03	Yes	No	—	—	75 to 160	–30 to –0
PVDF	3.50	5.44	196.22	29.76	0.05	Yes	Yes	177.2510	1.4200	141 to 178	–60 to –20
XLPE	16.32	71.88	225.36	4.6–6.2	<0.01	Yes	No	—	1.5400	N/A	N/A
TPE	12.05–56.34	33.03–251	0.70–3,354.76	—	0.05–5.1	Yes	Yes	177.2600	—	N/A	N/A
EPR	9.71–58.29	29.14–252.57	0.84–3,108.43	—	0.05	—	Yes[9]	177.2600	—	N/A	–54
SAN	—	—	—	—	0.2	—	Yes	177.1040	1.5700	108	N/A
Silicone	—	—	—	—	0.1	—	Yes[18]	177.2600	—	N/A	–130 to –120

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3. Plastic will absorb heat.
4. STERILIZATION
   - Autoclaving (121°C, 15 psig for 20 minutes)—Clean and rinse items with distilled water before autoclaving. (**Always completely disengage thread before autoclaving.**) Certain chemicals which have no appreciable effect on resins at room temperature may cause deterioration at autoclaving temperatures unless removed with distilled water beforehand.
   - Gas—Ethylene Oxide, formaldehyde, hydrogen peroxide.
   - Dry Heat (160°C, 120 minutes)
   - Disinfectants—Benzalkonium chloride, formalin/formaldehyde, ethanol, etc.
   - Radiation—gamma irradiation at 25 kGy (2.5 MRad) with unstabilized plastic.
5. Sterilizing reduces mechanical strength. Do not use PC vessels for vacuum applications if they have been autoclaved. Refer to Use and Care Guidelines for NALGENE Labware, for detailed information on sterilizing.
6. "Yes" indicates the resin has been determined to be non-cytotoxic, based on USP and ASTM biocompatibility testing standards utilizing an MEM elution technique on a WI38 human diploid lung cell line.
7. Resins meet requirements of CFR21 section of Food Additives Amendment of the Federal Food and Drug Act. End users are responsible for validation of compliance for specific containers used in conjunction with their particular packaging applications.
8. Acceptable for aqueous foods only, at temperatures up to 121°C/250°F. Not sanctioned for use with alcoholic or fatty foods at any temperature.
9. Acceptable for:
   - Nonacid, aqueous products; may contain salt, sugar or both (pH above 5.0).
   - Dairy products and modifications; oil-in-water emulsions, high or low fat.
   - Moist bakery products with surface containing no free fat or oil.
   - Dry solids with the surfaces containing no free fat or oil (no end-test required) and under all conditions as described in Table 2 of FDA Regulation 177.1520 except condition A—high temperature sterilization (e.g. over 100°C/212°F).
10. Acceptable for:
    - Alcoholic foods containing not more than 15% (by volume) alcohol; fill and storage temperature not to exceed 49°C (120°F).
    - Non-alcoholic foods of hot fill to not exceed 82°C (180°F) and 49°C (120°F) in storage.
    - Not suitable for carbonated beverages or beer or packaging food requiring thermal processing.
11. Straight-sided jars, beakers and graduated cylinders only.
12. Acceptable for aqueous, oil, dairy, acidic, and alcoholic foods up to 71° C/160° F.
13. The brittleness temperature is the temperature at which an item made from the resin may break or cracked if dropped. This is not the lowest use temperature if care is exercised in use and handling.
14. The tubing will become opaque from absorbed water, see the current NALGENE® Labware catalog for details.
15. WVTR = Water Vapor Transmission rate in g-mm/m² - 24 hr. - 1 BAR at 37°C and 90% Relative Humidity.

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Chemical Resistance Classification

E 30 days of constant exposure causes no damage. Plastic may even tolerate for years.

G Little or no damage after 30 days of constant exposure to the reagent.

F Some effect after 7 days of constant exposure to the reagent. Depending on the plastic, the effect may be crazing, cracking, loss of strength or discoloration. Solvents may cause softening, swelling and permeation losses with LDPE, HDPE, PP, PPCO and PMP. The solvent effects on these five resins are normally reversible; the part will usually return to its normal condition after evaporation.

N Not recommended for continuous use. Immediate damage may occur. Depending on the plastic, the effect will be a more severe crazing, cracking, loss of strength, discoloration, deformation, dissolution or permeation loss.

This information is only a summary. To access our chemical resistance database, go to: www.NALGENElabware.com/techdata/chemical/index.asp

Resin Codes

ECTFE	Halar* ECTFE (ethylene-chlorotrifluoroethylene copolymer)
ETFE	Tefzel† ETFE (ethylene-tetrafluoroethylene)
FEP	Teflon† FEP (fluorinated ethylene propylene)
FLPE	fluorinated high-density polyethylene
FLPP	fluorinated polypropylene
HDPE	high-density polyethylene
LDPE	low-density polyethylene
PC	polycarbonate
PETG	polyethylene terephthalate copolyester
PFA	Teflon† PFA (perfluoroalkoxy)
PMMA	polymethyl methacrylate (acrylic)
PMP	polymethylpentene (“TPX”)
PP	polypropylene
PPCO	polypropylene copolymer
PPO	polyphenylene oxide
PS	polystyrene
PSF	polysulfone
PUR	polyurethane
PVC	polyvinyl chloride
PVDF	polyvinylidene fluoride
ResMer	ResMer™ Manufacturing Technology
SAN	styrene acrylonitrile
TFE	Teflon† TFE (tetrafluoroethylene)
TPE	thermoplastic elastomer
XLPE	cross-linked high-density polyethylene

* Halar is a registered trademark of Solvey Solexis.

† Or equivalent.

Tefzel and Teflon are registered trademarks of DuPont.

For more technical information and the latest product news visit: www.NALGENElabware.com

Chemical Resistance Summary*

Classes of Substances at 20°C	ECTFE/ETFE	FEP/TFE/PFA	FLPE	FLPP	HDPE	LDPE	PC	PETG	PMMA	PMP	PP/PPCO	PS	PSF	PUR	PVC (BOTTLE)	FLEXIBLE PVC TUBING	PVDF	ResMer™	TPE***
Acids, dilute or weak	E	E	E	E	E	E	E	G	G	E	E	E	E	F	E	G	E	E	G
Acids,** strong and concentrated	E	E	G	G	G	G	N	N	N	E	G	F	G	N	G	F	E	G	F
Alcohols, aliphatic	E	E	E	E	E	E	G	G	N	E	E	G	G	N	G	F	E	E	E
Aldehydes	E	E	G	G	G	G	F	G	F	G	G	F	F	N	G	N	G	G	G
Bases/Alkali	E	E	F	E	E	E	N	N	F	E	E	E	E	F	E	F	G	E	F
Esters	G	E	G	G	G	G	N	F	N	E	G	N	N	N	N	N	G	F	N
Hydrocarbons, aliphatic	E	E	E	G	G	F	G	G	G	G	G	F	G	G	G	F	E	G	E
Hydrocarbons, aromatic	G	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	E	F	N
Hydrocarbons, halogenated	G	E	G	F	N	N	N	N	N	N	N	N	N	N	N	N	F	F	F
Ketones, aromatic	G	E	G	G	N	N	N	N	N	F	N	N	N	N	F	N	F	F	N
Oxidizing Agents, strong	E	E	F	F	F	F	F	F	N	G	F	G	G	N	G	F	G	G	N

* For tubing chemical resistance, other than PVC, see tubing section.

** Except for oxidizing acids: for oxidizing acids, see “Oxidizing Agents, strong.”

*** TPE gaskets.

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L10002 ©2007 Nalge Nunc International
Printed in USA

ISO 13485:2003
FM 31464

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