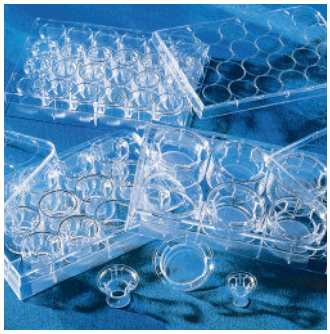
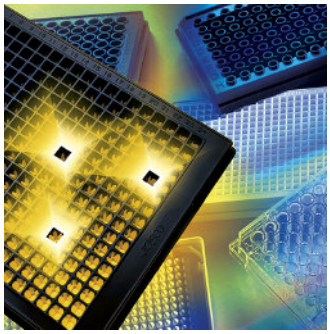
Corning Life Sciences Selection Guide

Issue 6





Possibilities Made Real

CORNING

Corning is helping to make your research possibilities real with new and innovative products.

Introduction

Corning is pleased to present our Life Sciences Selection Guide. In this guide, you will find a selection of our newest, most innovative and most requested products.

For more than 150 years, Corning Incorporated has leveraged its materials science and process engineering expertise to collaborate closely with customers worldwide — turning what were once only possibilities into breakthrough realities.

One such reality is the Corning® Epic® System, a high-throughput label-free screening platform based on optical biosensor technology. The system performs both biochemical and cell-based drug discovery applications and offers drug developers the ability to evaluate promising new drug targets. It also allows for the observation of direct biological interactions not previously detectable in high-throughput applications.

For hard-to-attach cell lines, Corning offers a number of modified or synthetic surfaces including Corning CellBIND® Surface, and Ultra-Low Attachment Surfaces. If you are trying to prevent or reduce attachment, we offer plates, dishes, flasks and the CellSTACK® Culture Chambers with our Ultra-Low Attachment surface. We also offer two new vessel formats, the HYPER*Flask*™ Cell Culture Vessel and Low Profile flask, for conserving incubator space.

We have recently advanced our microplate line to include many enhancmements and new products. Check out the new 384 well solid, low-volume and Poly-D-Lysine microplates, as well as 384 and 1536 well microplates with generic bar codes in the Microplates Section.

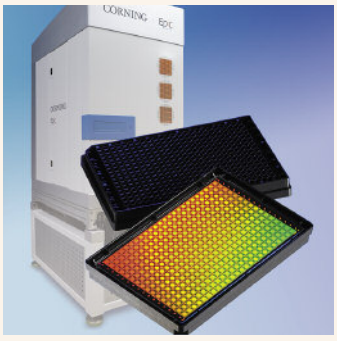
For up-to-date information on Corning Life Sciences' comprehensive range of products and services, go to **www.corning.com/lifesciences** where you can access:

- New Products Information
- Technical Information including:
  - Application Notes
  - Instruction Manuals
  - Product Bulletins
- Educational Opportunities
- Product Catalog Information
- Product Literature
- Complete Distributor Information

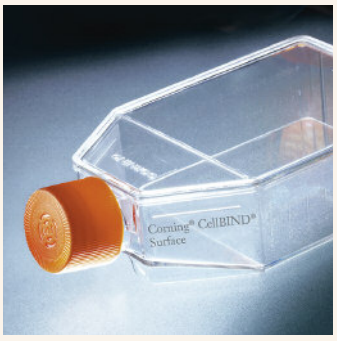
For additional product information, please visit **www.corning.com/lifesciences**, or call 1.800.492.1110. Customers outside the United States, please call 1.978.442.2200 or contact your local support office (see back cover).

Try one of our newest innovations and see if it can help to make your research possibilities real.

Grow enough cells in one 1720 cm² HYPER*Flask* Cell Culture Vessel to seed 2,000 microplates.



Corning's Epic System, the new high-throughput, label-free detection technology allows researchers to bring drugs to market faster.



Improve cell attachment and yield with our Corning CellBIND surface – a nonbiological surface with high oxygen levels.

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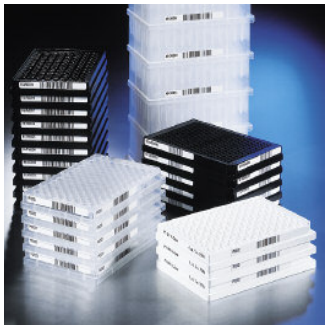
What's New from Corning

CELL CULTURE & BIOPROCESS (Page 1)

- Corning® HYPER*Flask*™ Vessels
- Corning Low Profile 100 cm² Flask
- Ultra-Web™ Synthetic Surfaces
- Transwell® Permeable Supports Coated with Cultrex® Basement Membrane Extract
- Corning 1L and 3L Disposable Plastic Spinner Flasks
- Corning Aseptic Transfer Caps
- Corning Baffled Erlenmeyer flasks



HTS AND ASSAY MICROPLATES (Page 45)

- Corning Generic Bar Coded Polystyrene Microplates
- Corning Low Volume 384 Well Solid Black Flat Bottom Microplates
- Corning 1536 Well Echo™ Qualified Microplates
- Corning 384 Well Low Flange Solid Black and White Microplates

GENERAL LABWARE AND EQUIPMENT (Page 97)

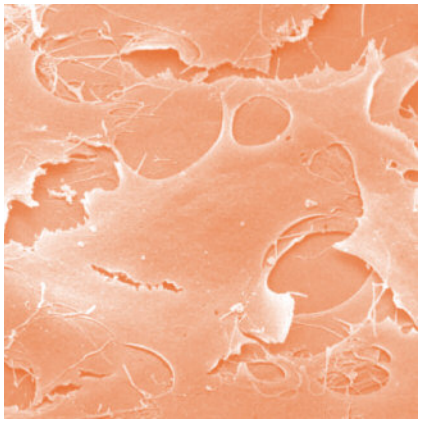
- Corning Square Polycarbonate Storage Bottles
- PYREX® Wide Mouth Storage Bottles
- Clean Room Packaging for Pipets
- Corning CentriStar™ Centrifuge Tubes
- Corning Digital Hot Plates and Stirrers

PROTEOMICS AND GENOMICS (Page 73)

- Next Generation Crystal*EX*™ Protein Crystallization Microplates
- Corning Epoxide Coated Slides

Online Cell Culture and Assay

Training



The Corning Scientific Seminar Series is a series of free online technical presentations that provide novel tips, best practices and proven techniques to help advance your research. Delivered by scientists, these one hour sessions have proven useful for technicians as well as for researchers who have been doing cell culture and assays for years.

Join us online for an upcoming session or download any of our previously recorded sessions. New topics are added monthly. Former topics include:

- Cell Culture Contamination – Every Researcher's Nightmare!
- Effects of Cell Culture Surfaces on Cellular Behavior
- Detecting, Removing and Managing Mycoplasma Contamination
- Grow More Cells! Scaling Up Cell Production
- Growing Happier Cells
- Growing Cells on Transwell Inserts – Tips and Techniques
- Life and Death *In Vitro* - Growth and Toxicity
- HeLa Cells - A Blessing or a Curse?
- More *In Vivo*-like Cell Cultures and Better Assays with Permeable Supports
- Optimizing Assay Performance through Microplate Attributes and Equipment Setting
- Primary Cell Culture – Tips and Techniques for Getting Started
- Solving Cell Culture Problems
- Using Frozen vs. Continuously Cultured Cells for HTS

Register at www.corning.com/lifesciences

What attendees had to say about past seminars:

"We are not getting information like this from anywhere. The seminar was amazing, very useful to my work. Thanks for organizing these sessions."

"Great tips! I'll pass along information I learned here to my colleagues to let them know how we should conduct cell culture properly. Many thanks again indeed."

"I use your seminars as training for new employees and estimate they save my company more than $24,000 a year in training costs."

All attendees receive a certificate of completion.

Training is co-sponsored by:

ATCC CORNING SOCIETY FOR IN VITRO BIOLOGY

Product Ordering Information

Ordering Products Direct from Corning

For our U.S. customers who currently have Corning accounts, you can order direct through our Customer Service group or online:

Tel.: 800.492.1110, 978.442.2200
Fax: 978.442.2476
Email: CLSCustServ@corning.com
Web: www.corning.com/lifesciences

Hours of Operation: Monday to Friday, 8 a.m. to 8 p.m. (Eastern Standard Time)

Customers outside of the U.S., please contact your local Corning distributor. See pages ix-xxiv or visit **www.corning.com/lifesciences** and click on "Contact Us."

Phone/Fax Orders

For each order, customers should provide the Corning product number, product description, and desired quantity. You should also include your billing and shipping address and your Corning account number.

Online Orders

In order to purchase Corning products online, please visit the Corning Life Sciences website at **www.corning.com/lifesciences**. Click on register/login and complete the online registration form. Customers using credit cards may immediately place orders. Full Service Direct accounts with account specific contract pricing will need to establish a direct account with Corning Customer Service before online transactions can be made. You can complete the online registration form or contact Corning Customer Service directly at 1.800.492.1110 in order to establish a direct account with Corning.

Ordering Products through our Distribution Partners

Customers can purchase Corning products from any one of our more than 50 authorized distributors. See our complete listing of Corning distributors on the following pages or online at **www.corning.com/lifesciences**. Our distribution partners can offer our customers a variety of value added services from local inventory and service, to managed services, and preferred programs. Please contact your distributor of choice for more details.

Pricing

Prices shown on the Corning Life Sciences website (in our online **www.corning.com/lifesciences** catalog) reflect our current suggested U.S. list price. For customer specific pricing information, please contact Corning Customer Service or your authorized Corning Distributor.

Product Return Policy

To return product, contact your local customer service representative. In some countries, the order and lot number details are required. Please have this information available to obtain a Return Authorization Number. This Return Authorization Number must be referenced on the outside of the shipping carton. Returns without an appropriate Return Authorization Number will be refused and returned at customer expense.

Distributors

Visit www.corning.com/lifesciences for a complete listing of worldwide distributors.

UNITED STATES

Ace Glass Inc.
P.O. Box 688
1430 Northwest Blvd.
Vineland, NJ 08360
USA
Tel.: 800-223-4524
Fax: 609-692-8919
Email: inquiry@aceglass.com
Web site: www.aceglass.com
Products: Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

A. Daigger & Co.
620 Lakeview Pkwy
Vernon Hills, IL 60061
USA
Tel.: 800-621-7193
Fax: 800-320-7200
Email: daigger@daigger.com
Web site: www.daigger.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business

Aldrich Chemical Co., Inc.
P.O. Box 355
1001 West St. Paul Ave.
Milwaukee, WI 53201
USA
Tel.: 414-273-3850
Fax: 414-273-4979
Email: aldrich@sial.com
Web site: www.sigmaaldrich.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Bellco Biotechnology
340 Edrudo Rd.
Vineland, NJ 08360
USA
Tel: 800-257-7043
Fax:856-691-3247
Web Site: www.bellcoglass.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification: Small Business

Best Lab Deals, Inc. (BLD, Inc.)
1000 Management Way
Garner, NC 27529
USA
Tel.: 866-552-1531
Fax: 919-661-8039
Web site: www.bestlabdeals.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Woman-Owned Business

Cardinal Health
1450 Waukegan Rd.
McGaw Park, IL 60085-6787
USA
Tel.: 800-964-5227
Web site: www.cardinal.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Chemglass
3861 North Mill Rd.
Vineland, NJ 08360
USA
Tel.: 800-843-1794
Fax: 800-922-4361
Web site: www.chemglass.com
Products: Glass, Hot Plates/Stirrers
Business Classification(s): Large Business (State); Small Business (Federal)

Cole-Parmer Instrument Co.
Continental Executive Park
625 East Bunker Court
Vernon Hills, IL 60061
USA
Tel.: 800-323-4340
Fax: 847-549-7676
Email: info@coleparmer.com
Web site: www.coleparmer.com
Products: Plastics, Glass, Hot Plates/Stirrers

E&K Scientific
3575 Thomas Rd.
Santa Clara, CA 95054
USA
Tel:800-934-8114
Fax: 408-378-2611
Web site: www.eandkscientific.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification: Small Business

EMSCO Scientific Enterprises, Inc.
P.O. Box 28032
51st & Parkside
Philadelphia, PA 19131
USA
Tel.: 215-477-5601
Fax: 215-477-2507
Web site: www.emscoscientific.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business, Minority, Disadvantaged, Women-Owned

Fisher Scientific Co.
2000 Park Lane
Pittsburgh, PA 15275
USA
Tel.: 800-766-7000
Fax: 800-926-1166
Web site: www.fishersci.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Fisher Scientific Company L.L.C. (Puerto Rico)
Road # 1 KM 56.4
P.O. Box 6000
Cayey, Puerto Rico 00737-8500
Tel.: 787-738-4231
Fax: 787-263-5817
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Fox Scientific, Inc.
8221 East FM 917
Alvarado, TX 76009
USA
Tel.: 800-369-5524
Tel.: 817-783-5000
Fax: 817-783-3571
Web site: www.foxscientific.com
Products: Plastic, Glass, Hot Plates/Stirrers
Business Classification(s): SBA (Small Business Assoc) MBDC (Minority Business Development Center), HUB and Texas Building and Procurement Commission

Government Scientific Source, Inc.
12351 Sunrise Valley Drive
Reston, VA 20191
USA
Tel.: 800-248-8030/703-734-1805 or 703-880-5000
Web site: www.govsci.com
Products: Hot Plates/Stirrers
Business Classification(s): Certified Small Veteran-Owned Business

ISC BioExpress
420 North Kays Dr.
Kaysville, UT 84037
USA
Tel: 800-999-2901.
Fax:801-547-5051
Web Site: www.bioexpress.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification: Small Business

Jade Scientific
7855 Ronda
Canton, MI 48187
USA
Tel.: 734-207-3775
Web site: www.jadesci.com
Products: Glass
Business Classification(s): Native American Woman-Owned

J & H Berge/The Lab Mart
4111 South Clinton Ave.
South Plainfield, NJ 07080
USA
Tel.: 800-684-1234/908-561-1234
Fax: 908-561-3002
Email: sales@labmartexpress.com
Web site: www.labmartexpress.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s) Small Woman-Owned Business

Krackeler Scientific
P.O. Box 1849
Albany, NY 12201
USA
Tel.: 518-462-4281
Fax: 518-462-6011
Email: ksi@capital.net
Web site: www.krackeler.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business

Laboratory Product Sales
1665 Buffalo Rd.
Rochester, NY 14624
USA
Tel.: 800-388-0166
Fax: 585-247-6686
Web site: www.LPSinc.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business

La-Mar-Ka, Inc.
10272 South Perdue
Baton Rogue, LA 70814
USA
Tel.: 800-826-5959
Tel.: 225-272-8125
Fax: 225-272-7150
Web site: www.lmkchemical.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): WBE (Women's Business Enterprise)

Macalaster Bicknell Co.
P.O. Box 109
Millville, NJ 08332
USA
Tel.: 609-825-3222
Fax: 609-825-3375
Email: info@macbicnj.com
Web site: www.macbicnj.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business

Macalaster Bicknell Co. Catalog Services, Inc.
P.O. Box 3257
169 Henry St.
New Haven, CT 06515-0357
USA
Tel.: 203-624-1694
Fax: 203-624-6308
Email: info@mbcoct.com
Web site: www.mbcoct.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business

Myriad Industries
3454 East St.
San Diego, CA 92102
USA
Tel.: 619-232-6700
Fax: 619-232-4819
Web site: www.myriadindustries.com
Products: Plastics
Business Classification(s): Small Business

Neta Scientific
Operations/Marketing
704 E. Main St., Suite H
Moorestown, NJ 08057
USA
Tel.: 856-866-1160 x20
Fax: 856-866-1185
Web site: www.netascientific.com
Products: Plastics
Business Classification(s): SBA/SDB and NMSDC Certified Minority and Woman Owned Business Enterprise

Quality Biological Inc.
7581 Lindberg Dr.
Gaithersburg, MD 20879
USA
Tel.: 301-840-9331
Fax: 301-840-5450
Web site: www.qualitybiological.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Minority-Owned Business

Sigma Aldrich
3050 Spruce St.
St. Louis, MO 63103
USA
Tel.: 800-325-3010/314-771-5765
Fax: 800-325-5052
Web site: www.sigmaaldrich.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Spectrum Laboratory Products, Inc.
14422 South San Pedro St.
Gardena, CA 90248-2027
USA
Tel.: 310-516-8000/800-772-8786
Fax: 310-516-7512
Web site: www.spectrumchemical.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Woman-Owned and Operated Small Business

Thomas Scientific Inc.
P.O. Box 99
99 High Hill Rd at 295
Swedesboro, NJ 08085-0099
USA
Tel.: 800-345-2100
Fax: 609-467-3087
Email: value@thomassci.com
Web site: www.thomassci.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business

Corning Science Education Distributors

Carolina Biological Supply
2700 York Rd.
Burlington, NC 27215
USA
Tel.: 800-334-5551
Fax: 800-222-7112
Email: carolina@carolina.com
Web site: www.carolina.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Small Business

Delta Education (Frey Scientific)
80 Northwest Blvd.
Nashua, NH 03063
USA
Tel.: 800-258-1302
Fax: 800-282-9560
Web site: www.delta-edu.com
Products: Glass, Hot Plates/Stirrers

Flinn Scientific, Inc.
P.O. Box 219
Batavia, IL 60510
USA
Tel.: 800-452-1261
Fax: 630-879-6962
Email: flinnsci@aol.com
Web site: www.flinnsci.com
Products: Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Fisher Science Education
4500 Turnberry Dr.
Hanover Park, IL 60133
USA
Tel.: 800-955-1177
Fax: 800-955-0740
Web site: www.fisheredu.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Sargent Welch
P.O. Box 5229
Buffalo Grove, IL 60089
USA
Tel.: 800-727-4368
Fax: 800-676-2540
Email: sarwel@sargentwelch.com
Web site: www.sargentwelch.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Science Kit & Boreal Laboratories
777 East Park Drive
Tonawanda, NY 14150
USA
Tel.: 716-874-6020
Fax: 716-874-9572
Web site: www.sciencekit.com
Products: Plastics, Glass, Hot Plates/Stirrers
Business Classification(s): Large Business

Ward's Natural Science
P.O. Box 92912
5100 West Henrietta Rd.
Rochester, NY 14692-9012
USA
Tel.: 800-962-2660/716-359-2502
Fax: 716-334-6174
Web site: www.wardsci.com
Products: Glass, Hot Plates/Stirrers

CANADA (Full Product Line)

Anachemia Science
255 Norman
Lachine
Quebec
Canada
H8R 1A3
Tel.: 800-361-0209
Fax: 888-438-9777
Email: info@anachemia.com
Web site: www.anachemia.com
Products: Glass, Hot Plates/Stirrers

Fisher Scientific Ltd.
112 Colonnade Rd.
Nepean
Ontario
Canada
K2E 7L6
Tel.: 800-234-7437
Fax: 800-463-2996
Products: Plastics, Glass, Hot Plates/Stirrers

Northwest Scientific Supply Ltd.
Suite #301
3060 Cedar Hill Rd.
Victoria
British Columbia
Canada
V8P 5L4
Tel.: 800-663-5890
Fax: 604-592-1341
Products: Glass, Hot Plates/Stirrers

ASIA/PACIFIC

Australia

Crown Scientific Pty Ltd.
1 Culverston Road
Minto.
N.S.W.
Australia, 2170
Tel.: 61-2-9933-4000/1300-727-696
Fax: 61-2-9602-9603 5155
Products: Glass only

DKSH Australia Pty Ltd.
14-17, Dansu Court
Hallam
Victoria
Australia, 3803
Tel.: 61-3-9554-6666/1800-032-984
Fax: 61-3-9554-6699
Products: Plastics, Hot Plates/Stirrers

Bahrain

Attieh Medico
P.O. Box 116105
21391 Jeddah
Saudi Arabia
Tel.: 966-2-661-3613
Fax: 966-2-665-1358
Products: Plastics

China

Genetimes Technology, Inc.
2nd Floor, No. 15 Qinjiang Rd.
Shanghai 200233, P.R. China
Tel.: 86-21-5426-2677(12 lines)
Fax: 86-21-6439-8855
Web site: www.genetimes.com.cn
Email: order@genetimes.com.cn
Products: Plastics, Glass, Hot Plates/Stirrers

Genetimes Technology, Inc.
15th Floor, SuiFeng Mansion
75 Xianlie Road (Mid),
Guangzhou 510610, P.R.China
Tel.: 86-20-87326000 (4 lines)
Fax: 86-20-87324871
Web site: www.genetimes.com.cn
Email: guangzhou@genetimes.com.cn
Products: Plastics, Glass, Hot Plates/Stirrers

JoySci Ltd.
Suite 1408, No. 16 An-Hui-Dong-Li
ChaoYang District
Beijing, China 100101
Tel.: 86-10-6496-4811
Fax: 86-10-6498-4225
Web site: www.joysci.com
Email: cxt@joysci.com
Products: Plastics, Glass, Hot Plates/Stirrers

JoySci Ltd.
Suite 1801, No. 268 Zhao-Jia-Bang Road
Shanghai, China 200031
Tel.: 86-21-6474-6306
Fax: 86-21-6474-6306
Web site: www.joysci.com
Email: cs@joysci.com
Products: Plastics, Glass, Hot Plates/Stirrers

Egypt

Clinilab
4,106 St., El-Etehad Square
21 El-Manial, Riham Tower, El-Maadi
11431 Cairo
Egypt
Tel.: 20 2 525 7212
Fax: 20 2 525 7210
Email: clinilab@intouch.com
Products: Plastics

Hong Kong

Camby Company, Ltd.
Units 4 & 6, 19/Floor, Block B
Kailey Ind'l Centre,
12 Fung Yip Street,
Hong Kong
Tel.: 852-2574-9846
Fax: 852-2838-1537
Email: cambyccl@yahoo.com
Products: Plastics, Glass, Hot Plates/Stirrers

India

M/s. Merck Specialties Private Limited
Shiv Sagar "A"
Dr. Annie Besant Road
Worli, Mumbai - 400 018
India
Tel.: 0091 22 6794 4309-19
Fax: 0091 22 6794 4311
Email: import.csc@merck.co.in
Products: Glass Labware

M/s. Sigma Aldrich Chemicals Pvt Ltd,
Plot No. 12, Bommasandra Jigani Link Road
Industrial Area
Bangalore - 560 100
India
Tel.: 0091 80 6621 9400
Fax: 0091 80 6621 9450
Email: spunjabi@sial.com
Products: Plastic Labware

M/s. Absolute Filtertech
304, Vraj Complex, Opp. Dhananjay Towers, Off.
132 Ft. Ring Road
Shyamal Row House, Satellite
Ahmedabad - 380015
India
Tel.: 0091 79 2676 4825
Fax: 0091 79 2676 4825
Email: absolutefiltertech@vishwa-group.com
Products: Plastic Labware

M/s. Gyan Scientific Traders India Pvt Ltd
5, Ashok Nagar
Nr. Bansmandi Crossing
Gautam Budh Marg
Lucknow - 226018
India
Tel.: 0091 522 2629 494
Fax: 0091 522 2630 649
Email: gyan12@satyam.net.in
Products: Plastic Labware

M/s. IBS Life Sciences
(Formerly known as India Biosciences)
Chamber No. 2 & 6, Bldg. No. 59
Near IIT Delhi, Ber Sarai
New Delhi
India
Tel.: 0091 11 2653 7151
Fax: 0091 11 2653 7150
Email: indiabiosciences@hotmail.com
Products: Plastic Labware

M/s. Incell Technologies,
1-2-8/11, 1st Floor, Gagan mahal Road
Domulguda, Hyderabad - 29
India
Tel.: 0091 40 6610 5767
Fax: 0091 40 6610 5767
Email: incelltech@rediffmail.com
Products: Plastic Labware

Indonesia

CV Indetraco
73 D JL Garuda
Jarkarta Pusat 10160
Indonesia
Tel.: 6221-420-1743/6221-426-5655
Fax: 6221-420-1232
Email: andy@indetraco.co.id
Products: Glass, Hot Plates/Stirrers

PT. INTRALAB EKATAMA
JL. Terapi Raya No. AD 2
Bogor 16111
Indonesia
Tel.: 62-251 359110 - 311662
Fax: 62-251 315710
Email: intralab@indo.net.id

Israel

Getter (2000) Ltd.
P.O. Box 3500
52134 Ramat Gan
Israel
Tel.: 972-3-5761520
Fax: 972-3-7523620
Products: Plastics

Japan

Asahi Techno Glass Corp.
50-1, Gyoda 1-Chome
Funabashi-Shi
Chiba
Japan
Tel.: 81-3-211-5441
Fax: 81-3-211-7002
Products: Glass

Korea

Daeil Science Co., Ltd.
4F Daeil Bldg, 1164-1
Gaepo-Dong, Gangnam-Gu
Seoul, Korea 135-260
Tel.: 82-2-577-6212
Fax: 82-2-577-8675
Email: info@daeilscience.co.kr
Web site: www.daeilscience.co.kr
Products: Plastics, Glass, Hot Plates/Stirrers

Kuwait

Attieh Medico
P.O. Box 116105
21391 Jeddah
Saudi Arabia
Tel.: 966-2-661-3613
Fax: 966-2-665-1358
Products: Plastics

Lebanon

Atom Medical Company s.a.r.l.
P.O. Box 90
1203 Beirut
Lebanon
Tel.: 961-1-249836
Fax: 961-1-249838
Products: Plastics

Eastern Scientific
Beirut
Lebanon
Tel.: 961-01-353795
Fax: 961-01-341719
Products: Hot Plates/Stirrers

Malaysia

Rank-Synergy Sdn Bhd
112 Jalan KIP 9
Taman Perindustrial KIP
52200 Kua, a Lumpur
Malaysia
Tel.: 603-62752596/8 or 603-62752599
Fax: 603-62752603
Email: ranksyn@tm.net.my
Products: Plastics, Glass, Hot Plates/Stirrers

New Zealand

DKSH New Zealand Limited
PO Box 303 032
North Harbour
14c Omega Street
Albany
Auckland
New Zealand
Tel.: 0800 357 517
Fax: 09 414 6899
Products: xxx

Oman

Attieh Medico
P.O. Box 116105
21391 Jeddah
Saudi Arabia
Tel.: 966-2-661-3613
Fax: 966-2-665-1358
Products: Plastics

Pakistan

New Chemical Centre
38-Abkari Road
Lahore-54000
Pakistan
Tel.: 92-42-735-6445
Fax: 92-42-735-0807
Products: Glass, Hot Plates/Stirrers

Philippines

Theo Pam Trading Corp.
Pasay City
Philippines
Tel.: 63-2-83-14808
Fax: 63-2-83-14040
Email: mlg@theopam.com.ph
Products: Glass, Hot Plates/Stirrers

Prazsion Laboratory
Metro Manila
Philippines
Tel.: 63-2-72-77238
Fax: 63-2-72-11708

Yana Chemodities, Inc.
151 Kaliraya St.
Quezon City
Philippines
Tel.: 63-2-73-13633
Fax: 63-2-73-20171
Email: lili.li@yanachemodities.com
Products: Plastics, Glass, Hot Plates/Stirrers

Qatar

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21391 Jeddah
Saudi Arabia
Tel.: 966-2-661-3613
Fax: 966-2-665-1358
Products: Plastics

Russia

Corning Costar Moscow
P.O. Box 33
Moscow 105484
Russia
Tel.: 7-095-4612208
Fax: 7-095-4612208
Email: cosmos@orc.ru
Products: Plastics

Saudi Arabia

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P.O. Box 116105
21391 Jeddah
Saudi Arabia
Tel.: 966-2-661-3613
Fax: 966-2-665-1358
Products: Plastics

Singapore

Practical Instruments Corp
Singapore
1232
Tel.: 65-6255-3545
Fax: 65-6253-4312
Products: Hot Plates/Stirrers

Scimed (Asia) PTE Ltd.
196 Pandan Loop #07-11
Pantech Industrial Complex
Singapore
128384
Tel.: 65-6779-3388
Fax: 65-6266-3086
Email: scimed@singnet.com.sg
Products: Plastics

United Scientific Equipment Pte Ltd
4 Leng Kee Road #04-08
SiS Building
Singapore
159088
Tel.: 65-6472-2711
Fax: 65-6473-4145
Email: use@united.com.sg
Products: Glass, Hot Plates/Stirrers

Taiwan, R.O.C.

Level Biotechnology Inc.
9F-3, No. 21, Lane 169
Kang-Ning St.
His-Chih 221, Taipei Hsien
Taiwan, R.O.C.
Tel.: 886-2-2695-9935
Fax: 886-2-2695-0403
Email: info@level.com.tw
Web site: www.level.com.tw
Products: Plastics

Shi Kee Trading Co., Ltd.
6 Fl., No. 6
Chung Hua Road
Sec. 2, Taipei
Taiwan, R.O.C.
Tel.: 886-2-2381-4721
Fax: 886-2-2381-4605
Products: Glass

Today's Instruments Co., Ltd.
7 Fl., No. 71
Chung-Shan Road
Lin-Kou Hsiang, Taipei Hsien
Taiwan, R.O.C.
Tel.: 886-2-2603-2311
Fax: 886-2-2603-2333
Email: todays@todays.com.tw
Web site: www.todays.com.tw
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Thailand
Tel.: 66-2-940-7680 / 66-2-940-7681
Fax: 66-2-940-8661
Email: anhscith@ksc.th.com
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Cesco Ltd
Bangkok 10200
Thailand
Tel.: 66-2-224-7286
Fax: 66-2-224-3118
Email: cesco@loxinfo.co.th
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Prakanong
Bangkok 10110
Thailand
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Email: leenamuc@whitegroup.co.th
Products: Glass, Hot Plates/Stirrers

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21391 Jeddah
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Fax: 966-2-665-1358
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A6, Group 111
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Web site: www.sigma-aldrich.com
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Fax: 43-1-489-3961-7
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Web site: www.szabo-scandic.com
Products: Plastics

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Industriepark Zwalubeek
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Web site: www.elscolab.com
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Denmark
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Web site: www.biotechline.dk
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2605 Brondby, Copenhagen
Denmark
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Fax: 45-43-56-59-05
Email: denorder@europe.sial.com
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Estonia
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Fax: 372-7-427085
Email: bioart@kodu.ee
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LABNET
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00580 Helsinki
Finland
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Fax: 358-9-4764-4310
Email: ml.varis@rake.fi
Web site: www.labnet.fi
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Tel.: 358 9 350 9250
Fax: 358 9 350 92555
Email: finorder@europe.sial.com
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ATGC Biotechnologie
Rue Des Freres Montgolfiers
BP 5 Croissy
Marne Laval
F-77313
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Fax: 33-1-60-95-51-01
Email: contact@atgc.fr
Web site: www.ATGC.fr
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Z.I. Mi Plaine
6, rue Hanri Becquerel
69744 GENAS
France
Tel.: 33-4-72-22-43-00
Fax: 33-4-72-22-43-00
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Web site: www.bioblock.com
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France
Tel.: 0800 211 408
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Germany

Beyer GmbH
Spangerstraße 8
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Germany
Tel.: 49 211/222455
Fax: 49 211/222515
Email: info@beyer-labor.de
Web site: www.beyer-labor.de
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Fisher Scientific GmbH
Im Heiligen Feld 17
58239 Schwerte
Germany
Tel.: 49 2304/932-5
Fax: 49 2304/932950
Web site: www.fishersci.com
Products: Plastics

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Robert-Hooke-Str. 8
28359 Bremen
Germany
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Fax: 49 (0) 421 175 99 300
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28195 Bremen
Germany
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Fax: 49 421 8413929
Web site: www.ols-bio.de
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Fromundstrasse 34
81547 Munchen
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Fax: 49 89/6912413
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Germany
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Fax: 089-65 13-11 69
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Fax: 30-31-321912
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Fax: 0109943831
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Maros Str. 40
H-6721 Szeged
Hungary
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Fax: 36-62-476-558
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Web site: www.zenonbio.hu
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Icelandic Pharmaceuticals Ltd.
Krokhals 14
Reykjavik 110
Iceland
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Fax: 354-540-8001
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Ireland

Fisher Scientific Ireland Ltd.
Suite 3, Plaza 212
Blanchards Town Corporate Park 2
Ballycoolin
Dublin 15
Ireland
Phone: +353 (0) 1885 5854
Fax: +353 (0) 1899 1855

Sigma-Aldrich Ireland Ltd
Dublin
Ireland
Tel.: 800 200 888
Fax: 800 600 222
Email: eicustsv@Europe.sial.com
Web site: www.sigma-aldrich.com
Products: Plastics

Italy

Celbio S.P.A.
Via Figino 20/22
20016 Pero (MI)
Italy
Tel.: 39-02-3810-1465
Fax: 39-02-3819-557
Email: info.bio@celbio.it
Web site: www.celbio.it
Products: Plastics

Sigma-Aldrich S.r.l.
Milan
Italy
Tel.: 02 33417310
Fax: 02 38010737
Email: itorder@Europe.sial.com
Web site: www.sigma-aldrich.com
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D 28077 Bremen
Germany
Tel.: 49-421-33670
Fax: 20-2-525-7210
Products: Plastics

Sciencescope LTD
Victor House
Kimathi street
PO Box 72963
0020 City Square
Nairobi, Kenya
Tel: 254 20 228 331
Fax: 254 20 318 221

Luxemburg

Fisher Bioblock Scientific Sprl
P.O. Box 567
B-7500 Tournai 1/Doornik 1
Belgium
Tel.: 056 260 260
Fax: 056 260 270
Email: belgium@bioblock.com
Web site: www.bioblock.be
Products: Plastics

Netherlands

Fisher Emergo bv
A Fisher Scientific Company
P.O.Box 4
NL 1120 AA Landsmeer
The Netherlands
Tel.: 020-4877000
Fax: 020-4877070
Email: info@emergofisher.com
Web site: www.fisheremergo.com
Products: Plastic

Omnilabo International BV
P.O.Box 3939
4800 DX Breda
The Netherlands
Tel.: 31 76 5 795 795
Fax: 31 76 5 876 236
Email: info@omnilabo.nl
Web site: www.omnilabo.nl
Products: Plastics

Sigma-Aldrich Chemie BV
Zwijndrecht
The Netherlands
Tel.: 0800 0229088
Fax: 0800 0229089
Email: nlcustsv@Europe.sial.com
Web site: www.sigma-aldrich.com
Products: Plastics

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Sigma-Aldrich Norway AS
Tevlingveien 23
NO-1081 Oslo
Norway
Tel.: 47-23-176000
Fax: 47-23-176010
Email: norsigma@europe.sial.com
Web site: www.sigma-aldrich.com
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Poland

Biomibo
ul.Strazyglowska 15
04-872 Warszawa
Poland
Tel.: 48-22-8720797 / 6126196
Fax: 48-22-8720797 / 6126196
Email: biomibo@supernet.pl
Products: Plastics

Sigma-Aldrich Sp.z.o.o.
Poznan
Poland
Tel.: 61 829 01 00
Fax: 61 829 01 20
Email: plcustsv@Europe.sial.com
Web site: www.sigma-aldrich.com
Products: Plastics

Portugal

Reagente 5
Rua Eng. Ezequil de Campos
330-B, Apartado 4710
4012 Porto Codex
Portugal
Tel.: 351-2-6198090
Fax: 351-2-6198099
Products: Plastics

Sigma-Aldrich Química, S.A.
Sintra
Portugal
Free Tel.: 800 20 21 80
Free Fax: 800 20 21 78
Email: poorders@Europe.sial.com
Web site: www.sigma-aldrich.com
Products: Plastics

Russia

Corning Costar Moscow
P.O. Box 33
Moscow 105484
Russia
Tel.: 7-095-4612208
Fax: 7-095-4612208
Email: cosmos@orc.ru
Products: Plastics

Slovenia

Labormed d.o.o.
Zg. Pirnice 96 c
Slo-1215 Medvode
Slovenia
Tel.: 386-1-3621-414
Fax: 386-1-3621-415
Email: info@labormed.si
Web site: www.labormed.si
Products: Plastics

South Africa

Adcock Ingram Critical Care Pty Ltd
P.O. Box 6888
2000 Johannesburg
South Africa
Tel.: 27-11-494-8000
Fax: 27-11-494-8305
Email: adcock.scientific@tigerbrands.com
Web site: www.aiscientific.co.za
Products: Plastics

Spain

Cultek S.L.
Avada. Cardenal Herrera
Oria 63
28034 Madrid
Spain
Tel.: 34-91-729-0333
Fax: 34-91-358-1761
Email: cultek@cultek.com
Web site: www.cultek.com
Products: Plastics

Sweden

Fisher Scientific GTF
S.Långebergsgatan 30
421 32 V Frölunda/Göteborg
Sweden
Tel.: 46-3-168-94-00
Fax: 46-3-168-07-17
Email: GTF@gtf.se
Web site: www.gtf.se
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Nordic Biolabs
Box 7293
Ritarslingan 16
18714 Taby
Sweden
Tel.: 46-8-630-8500
Fax: 46-8-630-0905
Email: info@nordicbiolabs.se
Web site: www.nordicbiolbas.se
Products: Plastics

Sigma-Aldrich Sweden AB
Solkraftsvägen, 14C
SE-13570 Stockholm
Sweden
Tel.: 46-8-742-42-00
Fax: 46-8-742-42-43
Email: sweorder@europe.sial.com
Web site: www.sigma-aldrich.com
Products: Plastics

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Fisher Scientific AG
Wilstrasse 57
CH-5610 Wohlen
Switzerland
Tel.: 41-56-618-41-11
Fax: 41-56-618-41-41
Email: info@ch.fishersci.com
Web site: www.ch.fishersci.com
Products: Plastics

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Blegistrasse 9
CH-6340 Baar
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Web site: www.vitaris.com
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UK
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Web site: www.fisher.co.uk
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UK
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Fax: 44 0870 7746540
Email: sales@consumables-uk.com
Web site: www.consumables-uk.com
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LATIN AMERICA

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Fax: (55 51) 3326-2401
Email: pa@pro-analise.com.br

Filial Sao Paulo
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Fax: (55-11) 5051-4770
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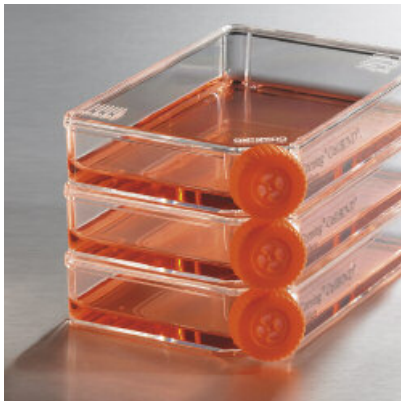
Cell Culture



Low Profile Flasks, page 11

HYPER*Flask*™ Cell Culture Vessel, page 12, 27

CellSTACK Culture Chambers, page 28

Overview

DESIGNED FOR PERFORMANCE

Corning Life Sciences offers a full line of cell culture products that are manufactured under strict process controls guaranteeing consistent product performance. All Corning Life Sciences plastics manufacturing facilities are ISO 9001:9002 registered. ISO registration is recognized worldwide as a standard of excellence for quality systems.

In addition, customers can now obtain a Certificate of Compliance or product description for any Corning® or Costar® cell culture product from our website. This certificate details lot-specific information on component materials, sterility testing, pyrogen testing, cell attachment, and growth characteristics.

Also available are detailed drawings that highlight product dimensions. Drawings are available simply by calling your local Corning Life Sciences office.

ADDITIONAL QUALITY ASSURANCES

Nonpyrogenic Certification

Most Corning and Costar cell culture products are certified nonpyrogenic with a documented endotoxin level of equal to or less than 0.1 EU/mL. Endotoxins have been shown to cause variability in cell culture. Nonpyrogenic certification is just another way Corning helps ensure consistent cell culture results. Corning also offers a detailed technical bulletin on the effects of endotoxins in cell culture. This may be obtained by calling your local Corning Life Sciences office or by downloading the bulletin from the Corning web site **www.corning.com/lifesciences**.

Lot Number Traceability

To ensure accurate lot number traceability in biotechnology research and production facilities, most Corning and Costar cell culture flasks and most roller bottles feature a lot number individually printed on each product. Lot number traceability helps simplify quality assurance procedures for tracking and monitoring production and research processes.

Consistent Surface Chemistry

All Corning and Costar cell culture products are produced in ISO-certified facilities. Cell culture products are made from USP Class VI materials in accordance with documented manufacturing procedures. By carefully controlling both the materials we use and our manufacturing process, Corning is able to provide consistent surface chemistries across our entire line of cell culture products. This consistency increases the researcher's ability to produce reliable results.

Innovative Cell Culture Surfaces for the 21st Century

Corning® Surfaces

For over 30 years, Corning culture vessels have been modified using corona discharge and vacuum plasma to generate better surfaces for growing attached cells.

Today's new culture technologies, such as stem cells and tissue engineering, require new surfaces with new capabilities. Corning's investments in developing surface technologies are paving the way for these new cell culture applications. See for yourself why Corning is the first and only name to trust for surfaces that are backed with a performance guarantee.

Corning's research center at Sullivan Park, Corning, New York

Surfaces for Enhancing Cell Attachment

Corning CellBIND® Surface

The unique Corning CellBIND surface uses a patented microwave process for incorporating significantly more oxygen into the cell culture surface, rendering it better for cell attachment especially under difficult conditions.

- Quickly adapts cells to reduced serum or serum-free conditions
- Improves attachment and yield
- No special handling or storage required

Corning Labware with Ultra-Web™ Synthetic Surfaces

Innovative Ultra-Web synthetic nanofiber surfaces offer cells
a more *in vivo*-like 3-D fibrillar topography for cells where current surfaces do not allow the desired cell culture performance or function.

- Growing cells, such as stem cells, liver, neuronal and primary cultures
- Helps promote a more *in vivo*-like cell morphology not obtainable with plastic 2-D surface
- Easy to view and harvest cells using standards methods
- Compatible with cell-based luminescence-reporter gene and FLIPR calcium flux assays

Corning Microplates with Poly-D-Lysine Coated Surface

Corning Poly-D-Lysine (PDL) microplates are coated with PDL (molecular weight range of 70 to 150 kDa) giving the surface a net positive charge for better cell attachment.

- Improves differentiation of primary neurons, glial cells, neuroblastomas
- Enhances attachment of transfected cell lines, including HEK-293
- Helps cells stay attached during assay processing

Surfaces for Reducing or Preventing Cell Attachment

Corning Ultra-Low Attachment Coated Polystyrene Surface

The Corning Ultra-Low Attachment surface uses a covalently bound hydrogel layer to inhibit cell attachment.

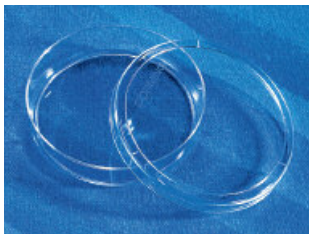
- Growing primary cultures of tumor or adult stem cells as unattached spheroids
- Preventing anchorage-dependent cells, such as fibroblasts, from attaching and dividing
- Promoting embryoid body formation from ES cells

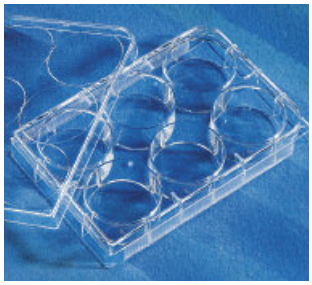
	Cell Culture Formats							
Corning Cell Culture Surfaces	**Flasks**	**Dishes**	**Multiple Well Plates**	**Microplates**	**Roller Bottles**	**CellSTACK® Chambers**	**CellCube® Chambers**	**Culture Tubes**
For enhancing cell attachment:								
Original Tissue Culture Surface	■	■	■	■	■	■	■	■
Corning CellBIND Surface	■	■	■	■	■	■	■	
Ultra-Web Surfaces		■		■				
Poly-D-Lysine Coated Surface				■				
For reducing or preventing cell attachment:								
Ultra-Low Attachment Surface	■	■	■	■		■		
Untreated Surface		■		■				■

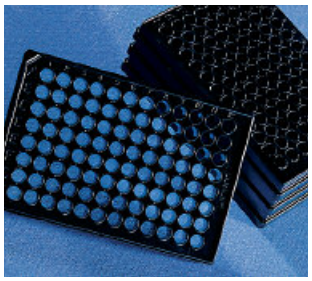
For more information or product numbers, reference the format categories within the Cell Culture section of this catalog.

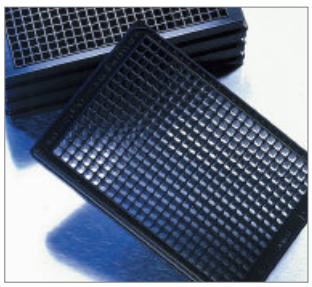
Corning® CellBIND® Surface

A Novel Surface for Improved Cell Attachment, Serum Reduction, or the Elimination of Coatings









Corning CellBIND Surface is now available on flasks, CellSTACK® Culture Chambers, multiple well plates, 96 and 384 well plates, dishes, and roller bottles.

Increase Cell Growth and Yields with Corning CellBIND Surface

The Corning CellBIND surface enhances cell attachment under difficult conditions, such as reduced-serum or serum-free medium, resulting in higher cell yields. The first novel cell culture surface treatment in over 20 years.

Developed by Corning scientists, this patented technology (U.S. Patent No. 6,617,152) uses a microwave plasma process for treating the culture surface. This process improves cell attachment by incorporating significantly more oxygen into the cell culture surface, rendering it more hydrophilic (wettable) and increasing surface stability.

Benefits

- May eliminate the need for tedious, time-consuming, expensive and low stability biological coatings
- More quickly adapts cells to reduced-serum or serum-free conditions
- Increase cell survival following cryo-preservation
- Reduces premature cell detachment from confluent cultures especially in roller bottles
- Better cell attachment leads to increased cell growth and yields
- More consistent and even cell attachment
- Requires no refrigeration or special handling and is stable at room temperature

Same High Quality Standards as Other Corning Vessels

- Manufactured from optically clear polystyrene
- Rigorous QC testing for consistency and reproducibility
- Certified nonpyrogenic and sterile
- Lot numbers for quality assurance and tracking
- Corning CellBIND surface logo differentiates from standard treatment cell culture products and avoids mix-ups

Cell Dissociation Recommendations

Culture inoculating and harvesting should be performed in the same manner as methods currently being employed. Both enzymatic and nonenzymatic dissociating solutions have been successfully used to remove cells from Corning CellBIND surfaces. These include: Trypsin-EDTA, Accutase®, Versene®, Dispase®, and Citric Saline. Some dissociating agents, such as Dispase or Versene, should be removed by centrifugation prior to plating the cells.

HYPER*Flask*™ Cell Culture Vessel

CellSTACK Culture Chambers

Enhanced Attachment of LNCaP Cells to the Corning® CellBIND® Surface*

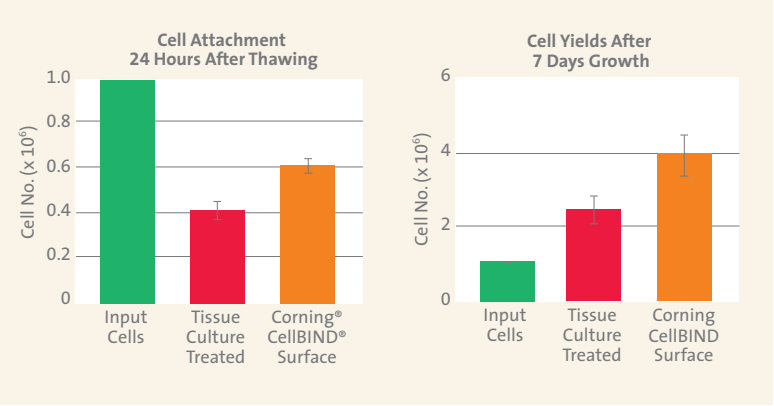


Figure 1. Left: Adherent cell recovery and growth of LNCaP cells 24 hours post-seeding. Data is average ± standard error from 3 independent experiments. Right: Average ± standard error from 3 independent experiments for 7 day growth after initial attachment.

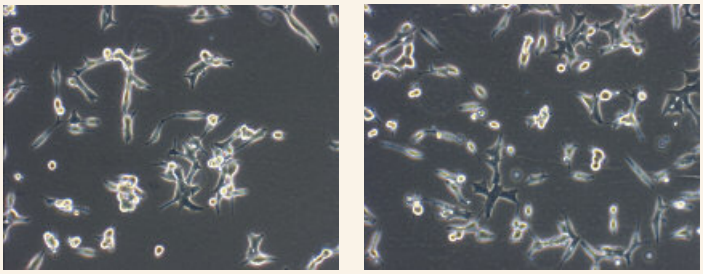


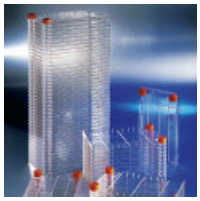
Figure 2. Attachment of LNCaP cells. Cells were thawed and plated onto the Corning CellBIND Surface (right) or tissue culture treated (left) T25 flasks. 24 hours post seeding a random field was viewed by light microscopy (100X magnification).

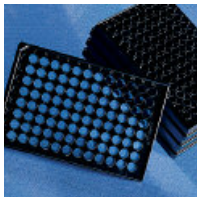
*From *Enhanced Attachment of LNCaP Cells to the Corning CellBIND Surface*, Corning SnAPPShot publication CLS-AN-048.

Corning CellBIND Surface Product Ordering Information

Cat. No.	Description	Qty/ Pk	Qty/ Cs
Roller Bottles			
3907	Roller Bottle, 850 cm², Corning CellBIND Surface, Easy Grip Cap, Sterile	2	40
431134	Expanded Surface Roller Bottle, 1700 cm², Corning CellBIND Surface, PS, Easy Grip Cap, Sterile	20	20
431329	Roller Bottle, 850 cm², Corning CellBIND Surface, Vent Cap, Sterile	2	40
431344	Roller Bottle, 850 cm², Corning CellBIND Surface, Easy Grip Cap, Sterile	22	44
Flasks			
3289	Flask, 25 cm², Corning CellBIND Surface with Vent Cap, Sterile	20	200
3290	Flask, 75 cm², Corning CellBIND Surface with Vent Cap, Sterile	5	100
New 3073	Low Profile Flask, 100 cm², Corning CellBIND Surface with Vent Cap, Sterile	6	60
3291	Flask, 150 cm², Corning CellBIND Surface with Vent Cap, Sterile	5	50
3292	Flask, 175 cm², Corning CellBIND Surface with Vent Cap, Sterile	5	50
3293	Flask, 225 cm², Corning CellBIND Surface with Vent Cap, Sterile	5	25
3298	Flask, 175 cm², Corning CellBIND Surface with Phenolic Cap, Sterile	5	50
431328	Flask, 175 cm², Corning CellBIND Surface, Bar coded with Vent Cap, Sterile	7	84

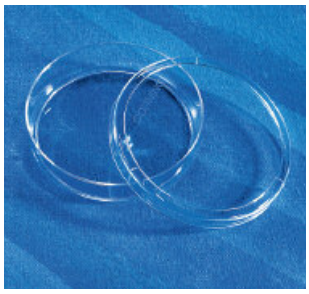
Corning® CellBIND® Surface Product Ordering Information (Continued)





Cat. No.	Description	Qty/ Pk	Qty/ Cs
New 10010	HYPER*Flask*™ Vessel, 1720 cm^2, Corning CellBIND Surface, Bar Code, Sterile	4	4
New 10024	HYPER*Flask* Vessel, 1720 cm^2, Corning CellBIND Surface, Bar Code, Sterile	4	24
431346	Expanded Surface Flask, 235 cm^2, Corning CellBIND Surface, with Bar Code, Vent Cap, Sterile	7	42
3068	RoboFlask® Tissue Culture Vessel for Automation, 92.6 cm^2 growth area, Corning CellBIND Surface, with Bar Code, Septum Cap, Sterile	10	50
3067	RoboFlask Tissue Culture Vessel for Automation, 92.6 cm^2 growth area, Corning CellBIND Surface, with Bar Code, Septum Cap, Sterile	20	100
CellSTACK® Culture Chambers			
3330	CellSTACK-1 Chamber, 636 cm^2 growth area, Corning CellBIND Surface, Sterile	1	8
3310	CellSTACK-2 Chamber, 1,272 cm^2 growth area, Corning CellBIND Surface, Sterile	1	5
3311	CellSTACK-5 Chamber, 3,180 cm^2 growth area, Corning CellBIND Surface, Sterile	1	2
3312	CellSTACK-10 Chamber, 6,360 cm^2 growth area, Corning CellBIND Surface, Sterile	1	2
3320	CellSTACK-10 Chamber, 6,360 cm^2 growth area, Corning CellBIND Surface, Sterile	1	6
3321	CellSTACK-40 Chamber, 25,440 cm^2 growth area, Corning CellBIND Surface, Sterile	1	2
Dishes			
3294	Dish, 35 x 10 mm style, Corning CellBIND Surface, Sterile	10	210
3295	Dish, 60 x 15 mm style, Corning CellBIND Surface, Sterile	7	126
3296	Dish, 100 x 20 mm style, Corning CellBIND Surface, Sterile	5	40
Multiple Well Plates			
3335	6 Well Plate, Corning CellBIND Surface, Clear, Sterile, with Lid	5	50
3336	12 Well Plate, Corning CellBIND Surface, Clear, Sterile, with Lid	5	50
3337	24 Well Plate, Corning CellBIND Surface, Clear, Sterile, with Lid	5	50
3338	48 Well Plate, Corning CellBIND Surface, Clear, Sterile, with Lid	5	50
Microplates			
3300	96 Well Plate, Corning CellBIND Surface, Clear Bottom, Sterile, with Lid	5	50
3340	96 Well Plate, Corning CellBIND Surface, Black/Clear Bottom, Sterile, with Lid	5	50
3683	384 Well Plate, Corning CellBIND Surface, Black/Clear Bottom, Sterile, with Lid	10	50

Ultra-Low Attachment Dishes, Plates, Flasks, and CellSTACK® Culture Chambers



3261 and 3262 Ultra-Low Attachment Dishes

The Ultra-Low Attachment surface is a unique covalently bonded hydrogel surface that is hydrophilic and neutrally charged. It minimizes cell attachment, protein absorption and enzyme activation. The surface is noncytotoxic, biologically inert and nondegradable.

Ultra-Low Attachment Dishes Ordering Information

Cat. No.	Dish Style (mm)*	Height (mm)	Growth Area (cm²)	Qty/Pk	Qty/Cs
3261	60	15	21	5	20
3262	100	20	55	5	20

*60 mm dish = 52.1 mm; 100 mm dish = 83.8 mm

Ultra-Low Attachment Plates Ordering Information

Cat. No.	Plate Type	Bottom Type	Diameter (mm)	Growth Area (cm²)	Qty/Pk	Qty/Cs
3471	6 well plate	Flat	34.8	9.5	1	24
3473	24 well plate	Flat	15.6	1.9	1	24
3474	96 well plate	Flat	6.4	0.32	1	24
New 7007	96 well plate	Round	6.4	0.32	1	24

3814 T-75 Flask

Ultra-Low Attachment Flasks Ordering Information

Cat. No.	Flask Type	Cap Style	Growth Area (cm²)	Qty/Pk	Qty/Cs
3815	Rectangular	Vent	25	6	24
3814	Rectangular	Vent	75	4	24

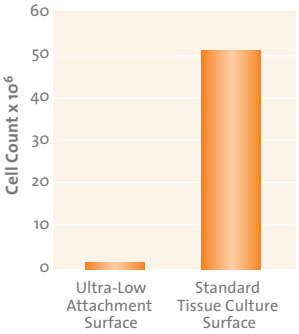
Ultra-Low Attachment CellSTACK Ordering Information

Cat. No.	Flask Type	Cap Style	Growth Area (cm²)	Qty/Pk	Qty/Cs
3303	CellSTACK Chamber, 1-Stack	Vent	636	1	8

Ultra-Low Attachment Tip

The Ultra-Low Attachment products may be useful for:

- Maintaining cells in a suspended, unattached state
- Preventing stem cells from attachment-mediated differentiation
- Preventing anchorage-dependent cells from dividing
- Reducing binding of attachment and serum proteins to the substrate



Comparison of Cell Attachment in Ultra-Low vs. Standard Tissue Culture Treated Plates

Vero cells plated at 2.6 x 10^6 cells per well grown for 4 days at 37°C in a 5% CO_2 environment show a 99% reduction in cellular attachment vs. standard culture treated product.

Suggested working volumes for Ultra-Low Attachment products:

- 96 well plate: 0.1 to 0.2 mL/well
- 24 well plate: 0.4 to 0.8 mL/well
- 6 well plate: 1.9 to 3.8 mL/well
- 60 mm dish: 4.2 to 6.3 mL/dish
- 100 mm dish: 11.0 to 16.5 mL/dish
- 25 cm^2 flask: 5 to 7.5 mL/flask
- 75 cm^2 flask: 15 to 22.5 mL/flask
- CellSTACK Chamber, 1-STACK: 127 to 190 mL/stack

There are no special procedures that need to be followed in order to use this surface.

Corning® Labware with Ultra-Web™ Surfaces

Technical Information

Ultra-Web Synthetic Surfaces are composed of randomly orientated electrospun polyamide nanofibers with an average fiber diameter of ~180 nm. This creates a culturing substrate that mimics structural components within the basement membrane or extracellular matrix.

Ultra-Web synthetic surface is available with two surface chemistries:

- Untreated electrospun polyamide nanofibers with an uncharged slightly hydrophilic surface
- Polyamine treated electrospun polyamide nanofibers with a positively charged surface for enhanced cell attachment or binding and covalently linking biomolecules

Ultra-Web Synthetic Surface Applications

- Ideal for culturing liver, neuronal, kidney and stem cell lines or primary cultures where current surfaces do not provide the necessary culture performance or function
- Replacement for poly-lysine or animal-derived biological coatings
- Ideal substrate for binding cell attachment and growth factors to create more *in vivo*-like culture environments
- Compatible with cell-based luminescence-reporter gene and FLIPR calcium flux assays
- Promotes more *in vivo*-like morphology (spheroid and dome formation)

Ultra-Web Synthetic Surface Features

- Synthetic surfaces are more stable and consistent lot to lot than biological coatings
- Cells grow on the nanofiber surface, not in it, for easy harvesting
- Easy to view cells using phase contrast microscopy
- Ready to use and room temperature stable
- Animal component-free and irradiation sterilized (SAL 10^{-6}) for extra security
- Compatible with most existing cell culture protocols and methods
- Easily coated with ECM molecules and growth factors

Imaging

Ultra-Web nanofibers provide a very thin three-dimensional surface on which the cells grow; consequently, focusing on and recognizing cells can be a little more difficult than traditional flat surfaces. Light microscopy, including phase contrast and differential interference contrast (DIC) can be used to view cells seeded on Ultra-Web surfaces.

Ultra-Web nanofibers should not interfere with imaging cells via fluorescence microscopy and has been tested successfully with Texas Red, Cy3, Cy5, FITC, and GFP filters. DAPI and Hoechst dyes demonstrate limited nonspecific binding to the Ultra-Web surface resulting in a slight increase in background staining dependent upon intensity of cell staining. Diluting DAPI or Hoechst staining solutions between 1:10 and 1:20 the recommended dose is suggested for routine staining to reduce this background staining. Testing with a cell-free control is advised.

Harvesting

Cells grown on Ultra-Web or Ultra-Web polyamine surfaces may be subcultured using standard cell dissociation techniques with trypsin, collagenase, or other enzymatic and nonenzymatic dissociation solutions or cell scraping (for recommended scrapers see Corning Cat. No. 3008 or 3010). Note: To aid cell detachment gentle pipetting or mechanical agitation by tapping the culture vessel may be used. Scraping can be used to detach any remaining cells. Gentle cell scraping results in minimal damage to the Ultra-Web surface. However, robust scraping will remove the Ultra-Web surface.

Corning Labware with Ultra-Web Surfaces Product Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
3870XX1	Corning 100 mm Dish with Ultra-Web Synthetic Surface, Sterile	5	20
3871XX1	Corning 100 mm Dish with Ultra-Web Synthetic Polyamine Surface, Sterile	5	20
3872XX1	Corning 96 Well Plate with Ultra-Web Synthetic Surface, Black/Clear Bottom, Sterile with Lid	5	10
3873XX1	Corning 96 Well Plate with Ultra-Web Synthetic Polyamine Surface, Black/Clear Bottom, Sterile with Lid	5	10

These products are covered by one or more of the following patents: U.S. Patent numbers 5002582, 5512329, 6121027, 6514734, 6924028, and 6955775. Additional U.S. and international patents pending.

Cell Culture Flasks

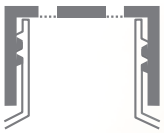
Corning® and Costar® flasks are available in a variety of sizes, designs and cap styles to meet your needs.

- Corning CellBIND® Surface is a novel cell culture treatment that increases surface wettability for more even and consistent cell attachment
- Ultra-Low Attachment flasks feature a covalently bound hydrogel layer that minimizes cell attachment, protein absorption and cellular activation
- Manufactured from optically clear virgin polystyrene
- Treated for optimal cell attachment
- Printed with lot numbers for ease in traceability
- 100% integrity tested
- Sterilized by gamma irradiation
- Certified nonpyrogenic

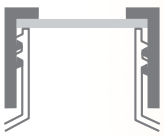
Flask Cap Styles

Plug seal caps feature one-piece linerless construction and are designed for use in closed systems, providing a liquid- and gas-tight seal. When loosened, this cap can also be used in open systems. This cap design was a Corning innovation that first appeared in 1974.

Phenolic style caps are designed (when loosened) for use in open systems requiring gas exchange. With the caps slightly loosened, gas is exchanged between the environments inside and outside of the flask.



Vent caps contain a 0.2 µm pore nonwettable membrane sealed to the cap, providing consistent, sterile gas exchange while minimizing the risk of contamination. These caps are highly recommended for use in all CO_2 incubators, especially for long-term use. The vent cap was a Corning innovation that first appeared in 1988.



Septum caps maintain a closed sterile environment within the RoboFlask™ vessel. The septum allows for adding or removing cells and solutions with a blunt tip cannula while reducing the opportunity for contamination. The septum is presplit to prevent coring of the septum by the cannula. The cap may also be removed to allow pipet access (up to 5 mL) or assist in harvesting of cells. This cap septum is validated for multiple entries.

Flask Neck Styles

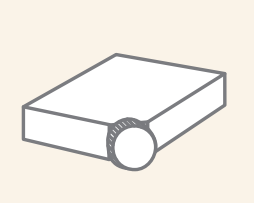
Straight neck flasks are ideal for larger medium volumes since this design reduces medium sloshing into the cap.

Canted neck flasks allow easier pouring and improved access to the flask for pipetting or scraping. The canted neck design was a Corning innovation that first appeared in 1974.

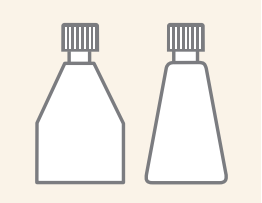
Angled neck improves pipet access and reduces medium sloshing into the neck. This patented design was a Corning innovation that first appeared in 1988.

Flask Shapes

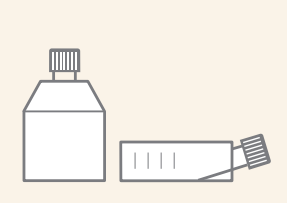
Choosing a flask shape is usually a matter of personal preference:



Low Profile flasks have reduced height for incubator space savings. The corner neck gives direct access to the flask corner.

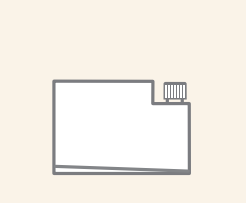


Triangular and modified triangular flasks offer good pipet and cell scraper access to the corners. The wider base provides added stability.



Rectangular flasks have a ramp from the bottom to the canted neck for easier pouring and pipet access. Most canted neck flasks also have an antitip skirt to enhance stability.

Angled neck and traditional straight neck flasks utilize the entire bottom area for cell growth. Their design saves on space and reduces medium sloshing into the neck.



RoboFlask™ vessels are robotics compatible cell culture flasks offering 92.6 cm² cell growth surface area. The flasks are designed for use in automated cell culture systems utilizing a microplate-size format.

3056 25 cm² Triangular Flask with Vent Cap

430639 25 cm² Canted Neck Flask with Vent Cap

Corning® Cell Culture Flask Ordering Information

25 cm² Growth Area Flasks

Cat. No.	Surface	Flask Style	Neck Style	Cap Style	Qty/Pk	Qty/Cs
430168	TC	Rectangular	Canted	Plug Seal	20	500
430372	TC	Rectangular	Canted	Phenolic-Style	20	500
430639	TC	Rectangular	Canted	Vent Cap	20	200
3055	TC	Triangular	Angled	Phenolic-Style	20	500
3056	TC	Triangular	Angled	Vent Cap	10	200
3289	Corning® CellBIND® Surface	Rectangular	Canted	Vent Cap	20	200
3815	Ultra-Low Attachment	Rectangular	Canted	Vent Cap	6	24

75 cm² Growth Area Flasks

Cat. No.	Surface	Flask Style	Neck Style	Cap Style	Qty/Pk	Qty/Cs
430641	TC	Rectangular	Canted	Vent Cap	5	100
430720	TC	Rectangular	Canted	Plug Seal	5	100
430725	TC	Rectangular	Canted	Phenolic-Style	5	100
3275	TC	Modified triangular	Straight	Phenolic-Style	5	100
3276	TC	Modified triangular	Straight	Vent Cap	5	100
3290	Corning CellBIND Surface	Rectangular	Canted	Vent Cap	5	100
3814	Ultra-Low Attachment	Rectangular	Canted	Vent Cap	4	24

Cell Culture Tip

Check the Corning web site (**www.corning.com/lifesciences**) for technical cell culture application bulletins.

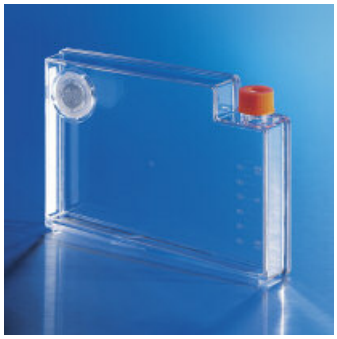
430641 75 cm² Canted Neck Flask with Vent Cap

430725 75 cm² Canted Neck Flask with Phenolic Style Cap

3275 75 cm² Triangular Flask with Phenolic Style Cap

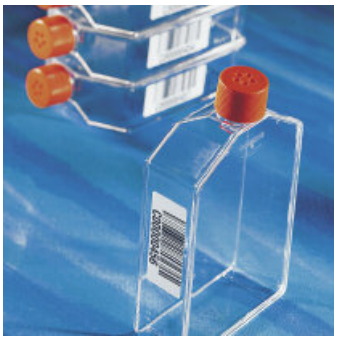
Cell Culture Flask Selection Tip

Corning's unique RoboFlask™ (U.S. Patent 7,078,228) Cell Culture Vessels are designed to an SBS standard microplate footprint for use in automated cell maintenance and assay systems.



3070 RoboFlask® Cell Culture Vessel with Septum Cap

430823 150 cm² Canted Neck Flask with Plug Seal Cap



431306 175 cm² Flask with Vent Cap and Bar Code

3073 Low Profile Flask

Cell Culture Flask Selection Tip

The Low Profile 100 cm² flask:

- gives 33% more area in the footprint of a T75 flask
- has a 1/2 turn easy-opening cap
- saves 33% in incubator space
- uses 26% less plastic than a T75 flask

Cell Culture Flask Application Tip

Corning recommends 0.2 to 0.3 mL of medium per cm² of growth area.

92.6 cm² Growth Area RoboFlask™ Vessels

Cat. No.	Description	Qty/Pk	Qty/Cs
3070	RoboFlask Cell Culture Vessel for automation, tissue culture treated, with bar code, septum cap, sterile	20	100
3071	RoboFlask Cell Culture Vessel for manual use, tissue culture treated, with bar code, flat cap (without septum), sterile	20	100
3069	RoboFlask Cell Culture Vessel for automation, tissue culture treated, with bar code, septum cap, sterile	10	50
3059	RoboFlask Cell Culture Vessel for manual use, tissue culture treated, with bar code, flat cap (without septum), sterile	10	50
3067	RoboFlask Cell Culture Vessel for automation, Corning® CellBIND® surface treatment with bar code, septum cap, sterile	20	100
3068	RoboFlask Cell Culture Vessel for automation, Corning CellBIND surface treatment with bar code, septum cap, sterile	10	50

100 cm² Growth Area Low Profile Flask

Cat. No.	Description	Qty/Pk	Qty/Cs
3073	Low Profile Flask, 100 cm², Corning CellBIND Surface with Vent Cap, Sterile	6	60
3816	Low Profile Flask, 100 cm², tissue culture surface with Vent Cap, Sterile	6	60

150 cm² Growth Area Flasks

Cat. No.	Surface	Flask Style	Neck Style	Cap Style	Qty/Pk	Qty/Cs
430823	TC	Rectangular	Canted	Plug Seal	5	50
430824	TC	Rectangular	Canted	Phenolic Style	5	50
430825	TC	Rectangular	Canted	Vent Cap	5	50
3291	Corning CellBIND Surface	Rectangular	Canted	Vent Cap	5	50

162 cm² Growth Area Flasks

Cat. No.	Surface	Flask Style	Neck Style	Cap Style	Qty/Pk	Qty/Cs
3150	TC	Traditional	Straight	Phenolic Style	5	25
3151	TC	Traditional	Straight	Vent Cap	5	25

431082 225 cm² Angled Neck Flask with Vent Cap

10010 HYPER*Flask* Vessel

Cell Culture Flask Selection Tip

The novel HYPER*Flask* Vessel offers high yield and high performance with 10 growth surfaces and 1720 cm² growth area in the same footprint as the 175 cm² flask.

3001 225 cm² Canted Neck Flask with Vent Cap

175 cm² Growth Area Flasks

Cat. No.	Surface	Flask Style	Neck Style	Cap Style	Qty/Pk	Qty/Cs
431079	TC	Rectangular	Angled	Plug Seal	5	50
431080	TC	Rectangular	Angled	Vent Cap	5	50
431085	TC	Rectangular	Angled	Phenolic Style	5	50
431306*	TC	Rectangular	Angled	Vent Cap	7	84
431328*	Corning® CellBIND® Surface	Rectangular	Angled	Vent Cap	7	84
3292	Corning CellBIND Surface	Rectangular	Angled	Vent Cap	5	50
3298	Corning CellBIND Surface	Rectangular	Angled	Phenolic Style	5	50

*Flask prelabeled with bar code, validated for use with SelecT™ Robotic System.

225 cm² Growth Area Flasks

Cat. No.	Surface	Flask Style	Neck Style	Cap Style	Qty/Pk	Qty/Cs
431081	TC	Traditional	Angled	Plug Seal	5	25
431082	TC	Traditional	Angled	Vent Cap	5	25
3000	TC	Rectangular	Canted	Phenolic Style	4	24
3001	TC	Rectangular	Canted	Vent Cap	4	24
3293	Corning CellBIND Surface	Traditional	Angled	Vent Cap	5	25

235 cm² Expanded Growth Area Flask

Cat. No.	Surface	Flask Style	Neck Style	Cap Style	Qty/Pk	Qty/Cs
431346*	Corning CellBIND Surface	Rectangular	Angled	Vent Cap	7	42

*Flask prelabeled with bar code for use with SelecT Automation System with same footprint as the 175 cm² flask.

1720 cm² Growth Area HYPER*Flask*™ *Vessel*

Cat. No.	Description	Qty/Pk	Qty/Cs
10010*	HYPER*Flask* Vessel, 1720 cm², Corning CellBIND Surface, Bar Code, Sterile	4	4
10024*	HYPER*Flask* Vessel, 1720 cm², Corning CellBIND Surface, Bar Code, Sterile	4	24

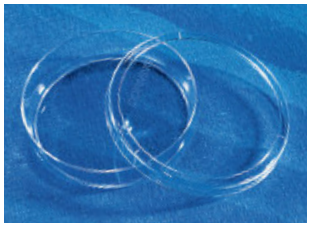
*Flask prelabeled with bar code for use with SelecT Robotic System.

Cell Yields and Recommended Medium Volume

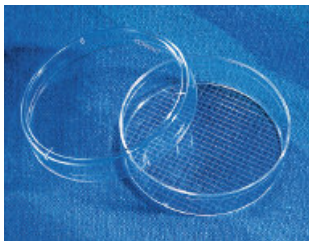
Corning and Costar® Flasks	Approximate Growth Area (cm²)	Average Cell Yield*	Recommended Medium Volume (mL)	Maximum Working Volume (mL)†
25 cm²	25	2.5×10^6	5 - 7.5	10
75 cm² Canted neck	75	7.5×10^6	15 - 22.5	60
75 cm² Straight neck	75	7.5×10^6	15 - 22.5	90
RoboFlask™ Vessel	93	9.4×10^6	20 - 30	70
100 cm²	100	1.0×10^7	20 - 30	40
150 cm²	150	1.5×10^7	30 - 45	210
162 cm²	162	1.6×10^7	32 - 48	175
175 cm²	175	1.75×10^7	35 - 52.5	250
225 cm²	225	2.25×10^7	45 - 67.5	370
235 cm²	235	2.35×10^7	47 - 70.5	250
1720 cm²	1720	2.5×10^8	565	565

*Assumes an average yield of 1×10^5 cells/cm² from a 100% confluent culture. Yields from many cell types can be lower than this.
†Maximum working volume is the amount a flask can hold in the horizontal position when filled to the neck.

Cell Culture Dishes



3296 Corning® CellBIND® Surface 100 mm Dishes



430196 Gridded 60 mm Dish

431110 500 cm² Cell Culture Dish

3870XX1 100 mm Tissue Culture Dish with Ultra-Web Synthetic Surface

Corning Cell Culture Treated Dishes

- Corning® CellBIND® Surface is a novel cell culture treatment that increases surface wettability for more even and consistent cell attachment
- Ultra-Low Attachment dishes feature a covalently bound hydrogel layer that minimizes cell attachment, protein absorption and cellular activation
- Ultra-Web™ Synthetic Surface is composed of electrospun polyamide nanofibers, creating a culturing substrate that mimics structural components within the basement membrane or extracellular matrix.
- 6-pack carriers with only 10 dishes/bag are available for 100 mm dishes (Cat No. 430293)
- 245 mm square dishes offer 500cm^2 growth surface
- Manufactured from optically clear virgin polystyrene
- Sterilized by gamma radiation
- Certified nonpyrogenic
- Have stacking beads to aid in handling
- Supplied with vents to provide consistent gas exchange

Corning® Cell Culture Dish Ordering Information

Cat. No.	Surface	Dish Style* (mm)	Approx. Height (mm)	Growth Area (cm²)	Qty/Pk	Qty/Cs
3294	Corning CellBIND Surface	35	10	8	10	210
430165	TC	35	10	8	20	500
430166	TC	60	15	21	20	500
3295	Corning CellBIND Surface	60	15	21	7	126
3261	Ultra-Low Attachment	60	15	21	5	20
3262	Ultra-Low Attachment	100	20	55	5	20
430196	TC	60 with 2 mm grid	15	21	20	500
3296	Corning CellBIND Surface	100	20	55	5	40
3870XX1	Ultra-Web Synthetic Surface	100	20	55	5	20
3871XX1	Ultra-Web Synthetic Polyamine Surface	100	20	55	5	20
430167	TC	100	20	55	20	500
430293	TC	100	20	55	10	480
430599	TC	150	25	148	5	60
431110	TC	245	25	500	4	16

*Dish style (mm) = actual growth surface diameters: 35 mm dish = 34.4 mm; 60 mm dish = 52.1 mm; 100 mm dish = 83.8 mm; 150 mm dish = 139.1 mm. The square dishes have interior bottom dimensions of 224 mm x 224 mm.

Cell Culture Tip

Check the Corning web site (**www.corning.com/lifesciences**) for technical cell culture application bulletins.

Corning Nontreated Cell Culture Dishes

- Manufactured from optically clear virgin polystyrene
- Not cell culture treated for applications where cell attachment is not desired
- Have stacking beads to aid in handling
- Supplied with vents to provide consistent gas exchange
- Sterilized by gamma radiation
- Certified nonpyrogenic

Cell Culture Dish Application Tips

- The 150 and 245 mm culture dishes make excellent carriers and incubator trays for 35 and 60 mm dishes. This helps prevent spills and reduces opportunities for contamination.
- Corning recommends 0.2 to 0.3 mL of medium per cm^2 of growth area.

Corning Nontreated Cell Culture Dish Ordering Information

Cat. No.	Dish Style* (mm)	Height (mm)	Approx. Growth Area (cm^2)	Qty/Pk	Qty/Cs
430588	35	10	9	20	500
430589	60	15	21	20	500
430591	100	20	55	20	500
430597	150	25	152	5	60
431111†	245	25	500	4	16

*Note: Dish style (mm) = actual growth surface diameters: 35 mm dish = 34.4 mm; 60 mm dish = 52.1 mm; 100 mm dish = 83.8 mm; 150 mm dish = 139.1 mm.
†Cat. No. 431111 is a square dish with interior bottom plate dimensions of 224 mm x 224 mm.

Expected Cell Yields and Recommended Medium Volumes

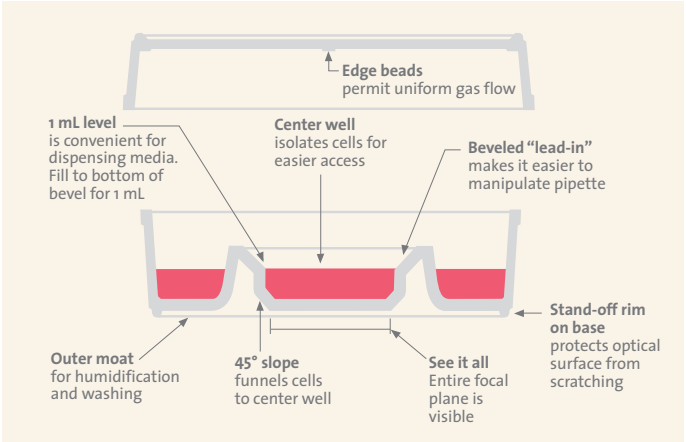
Corning Dishes	Approximate Growth Area (cm^2)	Average Cell Yield*	Recommended Medium Volume (mL)†
35 mm	9	9.0×10^5	1.8 - 2.7
60 mm	21	2.1×10^6	4.2 - 6.3
100 mm	55	5.5×10^6	11 - 16.5
150 mm	152	1.52×10^7	30.4 - 45.6
245 mm (square)	500	5.0×10^7	100 - 150

*Assumes an average yield of 1×10^5 cells/cm^2 from a 100% confluent culture.
†Yields from many cell types can be lower than this.

Costar® IVF Culture Dish

3260 IVF Culture Dish

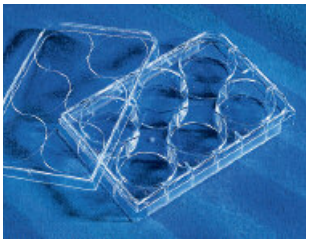
- 20 mm center well
- Inner well holds 3 mL of medium while the outer well holds 10 mL
- Treated for optimal cell attachment
- Sterilized by gamma radiation
- Certified nonpyrogenic
- For research use only



Costar IVF Culture Dish Ordering Information

Cat. No.	Size (mm)	Description (mm)	Center Well (mm)	Qty/Pk	Qty/Cs
3260	60	60 x 15	20	20	500

Multiple Well Plates



3516 6 Well Culture Plate

3513 12 Well Culture Plate

3524 24 Well Culture Plate

3548 48 Well Culture Plate

Costar® 6, 12, 24, and 48 Well Cell Culture Plates

- Corning® CellBIND® Surface is a novel cell culture treatment that increases surface wettability for more even and consistent cell attachment
- Ultra-Low Attachment plates feature a covalently bound hydrogel layer that minimizes cell attachment, protein absorption and cellular activation
- Nonreversible lids with condensation rings to reduce contamination, uniform footprint for ease in stacking
- Individual alphanumerical codes for well identification, flat bottoms
- Treated for optimal cell attachment (except where noted)
- Sterilized by gamma irradiation, certified nonpyrogenic

6, 12, 24, and 48 Well Plates Ordering Information

Cat. No.	Surface	Plate Type	Qty/Pk	Qty/Cs
6 Well Plates				
3335	Corning® CellBIND® Surface	Standard clear plate	5	50
3506	TC	Standard clear plate	5	100
3516	TC	Standard clear plate	1	50
3471	Ultra-Low Attachment	Standard clear plate with hydrogel*	1	24
12 Well Plates				
3336	Corning CellBIND Surface	Standard clear plate	5	50
3512	TC	Standard clear plate	5	100
3513	TC	Standard clear plate	1	50
24 Well Plates				
3337	Corning CellBIND Surface	Standard clear plate	5	50
3524	TC	Standard clear plate	1	100
3526	TC	Standard clear plate	1	50
3527	TC	Standard clear plate	5	100
3473	Ultra-Low Attachment	Standard plate with hydrogel*	1	24
48 Well Plates				
3338	Corning CellBIND Surface	Standard clear plate	5	50
3548	TC	Standard clear plate	1	100

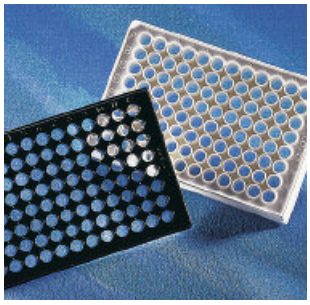
*This covalently bonded hydrogel surface minimizes cell attachment, protein absorption, enzyme activation and cellular activation. The surface is noncytotoxic, biologically inert and nondegradable.

Well Dimensions, Expected Cell Yields, and Recommended Medium Volumes

		Single Well Only				Entire Plate		
Cell Culture Plates	Well Diameter (Bottom, mm)	Approx. Growth Area (cm^2)	Average Cell Yield*	Total Well Volume (mL)	Working Volume (mL)	Approx. Growth Area (cm^2)	Average Cell Yield*	Working Volume (mL)
6 well	34.8	9.5	9.5×10^5	16.8	1.9 - 2.9	57	5.7×10^6	11.4 - 17.1
12 well	22.1	3.8	3.8×10^5	6.9	0.760 - 1.14	45.6	4.56×10^6	9.1 - 13.7
24 well	15.6	1.9	1.9×10^5	3.4	0.380 - 0.570	45.6	4.56×10^6	9.1 - 13.7
48 well	11	0.95	9.5×10^4	1.6	0.19 - 0.285	45.6	38.4×10^6	9.1 - 13.7

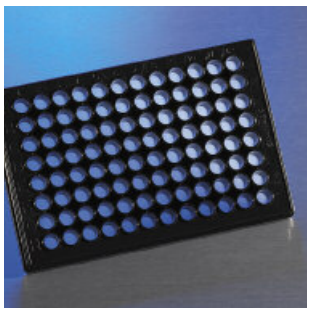
*Assumes an average yield of 1×10^5 cells/cm^2 from a 100% confluent culture. Yields from many cell types can be lower than this.

3596 96 Well Culture Plate



3610 and 3603
96 Well Clear Bottom Plates

3917 and 3916
96 Well Solid Plates



3872XX1
96 Well Plate with Ultra-Web Synthetic Surface

Corning® and Costar® 96 Well Cell Culture Plates

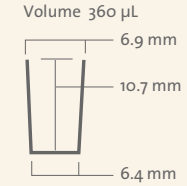
- Corning CellBIND® Surface is a novel cell culture treatment that increases surface wetability for more even and consistent cell attachment
- Ultra-Low Attachment plates feature a covalently bound hydrogel layer that minimizes cell attachment, protein absorption and cellular activation
- Ultra-Web™ Synthetic Surface is composed of electrospun polyamide nanofibers, creating a culturing substrate that mimics structural components within the basement membrane or extracellular matrix.
- Corning Poly-D-Lysine (PDL) microplates are coated with PDL (molecular weight range of 70 to 150 kDa) giving the surface a net positive charge for better cell attachment.
- Nonreversable lids with condensation rings to reduce contamination (except where noted)
- Treated for optimal cell attachment (except where noted)
- Sterilized by gamma radiation, certified nonpyrogenic
- Individual alphanumeric codes for well identification, flat bottoms (except where noted)

Black plates are designed to lower background in fluorescent assays and reduce crosstalk. White plates are designed for luminescent assays. Some plates have the Corning CellBIND surface or a poly-D-lysine coating to enhance cell attachment. Corning offers many other 96 well plate types for applications other than cell culture; for a complete listing, check the catalog at **www.corning.com/lifesciences.**

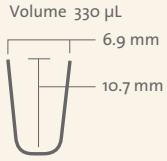
Corning® Assay Surface Properties and Applications

Corning Surface	Applications	Binding Interaction	Sample Properties
Standard Tissue Culture Surface	• Assays using standard attachment dependent cell lines	Hydrophilic and ionic interactions (negatively charged)	Allows cell attachment and binding
Corning CellBIND Surface	• Assays for difficult to attach cells • Help cells stay attached during washing steps	Hydrophilic and ionic interactions (negatively charged)	Enhances cell attachment uniformity and binding to polystyrene
Poly-D-Lysine-Coated Surface	• Assays for difficult to attach cells • Help cells stay attached during washing steps	Hydrophilic and ionic interactions (positively charged)	Enhances cell attachment and binding
Ultra-Low Attachment Surface	• Assays where preventing cell attachment is required • Hybridoma production and clonal isolation by limiting dilution	Nonionic hydrogel layer reduces or eliminates ionic and hydrophobic binding	Prevents or reduces cell attachment and binding
Ultra-Web Surface	• Assays where cell attachment or performance is enhanced by using a 3D surface	Hydrophilic interactions on a 3D surface	Enhances cell attachment and performance
Ultra-Web Polyamine Surface	• Assays where cell attachment or performance is enhanced by using a 3D surface	Hydrophilic and ionic interactions (positively charged) on a 3D surface	Enhances cell attachment and performance

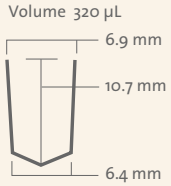
Well Geometry



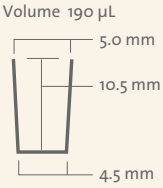
Flat Bottom



Round Bottom



V Bottom



Half Area

Cell Culture Tip

Check the Corning web site (**www.corning.com/lifesciences**) for technical cell culture application bulletins.

96 Well Plate Ordering Information

Cat. No.	Surface	Description	Qty/ Pk	Qty/ Cs
Clear Plates				
3300	Corning® CellBIND® Surface	Standard clear plate	5	50
3596	TC	Standard clear plate	1	50
3997	TC	Standard clear plate	10	50
3598	TC	Standard clear plate	5	100
3599	TC	Standard clear plate	1	100
3585	TC	Standard clear plate with special low evaporation lid	5	50
3595	TC	Standard clear plate with special low evaporation lid	1	50
3696	TC	96 well half area, flat bottom clear plate	1	50
3697	TC	96 well half area clear plate	20	100
3790	Not Treated	96 well round bottom, polypropylene plate with polystyrene lid	1	50
3799	TC	96 well round bottom clear plate	1	50
3894	TC	96 well V-bottom clear plate	1	50
3665	Poly-D-lysine	Standard clear plate, coated	20	100
9102	TC	8-well strip plate, assembled 12 strips per plate	1	50
3474	Ultra-Low Attachment	Standard clear plate with hydrogel*	1	24
7007	Ultra-Low Attachment	96 well round bottom plate with hydrogel*	1	24
White Plates				
3917	TC	Solid white plate	20	100
3362	TC	Solid white plate without lid	25	100
3688	TC	96 well half area solid white plate	20	100
3885	TC	96 well half area white plate with clear bottom	20	100
3610	TC	White plate with clear bottom	1	48
3903	TC	White plate with clear bottom	20	100
3666	Poly-D-lysine	White plate with clear bottom	20	100
Black Plates				
3340	Corning CellBIND Surface	Black plate with clear bottom	5	50
3872XX1	Ultra-Web™ Synthetic Surface	Black plate with clear bottom, with lid	5	10
3873XX1	Ultra-Web Synthetic Polyamine Surface	Black plate with clear bottom, with lid	5	10
3916	TC	Solid black plate	20	100
3875	TC	96 well half area solid black plate	20	100
3882	TC	96 well half area black plate with clear bottom	20	100
3603	TC	Black plate with clear bottom	1	48
3904	TC	Black plate with clear bottom	20	100
3667	Poly-D-lysine	Black plate with clear bottom	25	100
3614	TC	Black plate with special optics, ultrathin, clear bottom, without lid	20	100
Lids and Tape				
3099	–	Universal lid, sterile	25	50
3345	–	Breathable Sealing tape, sterile	50	500
3930	–	Rigid styrene lid with condensation rings, sterile	1	100
3931	–	Rigid styrene lid with condensation rings, sterile	25	50

*This covalently bonded hydrogel surface minimizes cell attachment, protein absorption, enzyme activation and cellular activation. The surface is noncytotoxic, biologically inert and nondegradable.

96 Well Cell Culture Plates

Well Dimensions, Expected Cell Yields, and Recommended Medium Volume

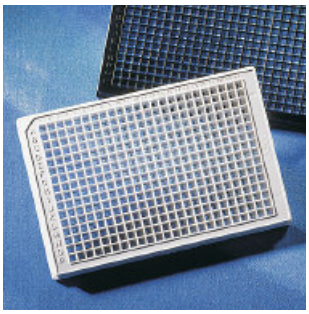
Cell Culture Plates	Well Diameter (Bottom, mm)	Single Well Only: Approx. Growth Area (cm²)	Single Well Only: Average Cell Yield*	Single Well Only: Total Well Volume (mL)	Single Well Only: Working Volume (mL)	Entire Plate: Approx. Growth Area (cm²)	Entire Plate: Average Cell Yield*	Entire Plate: Working Volume (mL)
96 well flat bottom	6.4	0.32	3.2×10^4	0.36	0.100 - 0.200	30.7	3.07×10^6	9.6 - 19.2
96 well round bottom	6.4	NA†	NA†	0.33	0.100 - 0.200	NA†	NA†	9.6 - 19.2
96 well V bottom	6.4	0.38	3.8×10^4	0.29	0.100 - 0.200	36.5	3.65×10^6	9.6 - 19.2
96 half area	4.5	0.16	1.6×10^4	0.19	0.050 - 0.100	15.4	1.54×10^6	4.8 - 9.6

*Assumes an average yield of 1×10^5 cells/cm² from a 100% confluent culture. Yields from many cell types can be lower than this.
†Because these wells are round, the surface area available for cell attachment is dependent on the medium volume used.

384 Well Cell Culture Plates

- Flat bottoms and lids
- New low volume plates have only a 50 µL total well volume, with recommended working volume of 5 to 40 µL
- Treated for optimal cell attachment
- Sterilized by gamma radiation
- Certified nonpyrogenic

Black plates are designed to lower background in fluorescent assays and reduce crosstalk. White plates are designed for luminescent assays. Some plates have the Corning® CellBIND® Surface or a poly-D-lysine coating to enhance cell attachment. Corning offers many other 384 well plate types for applications other than cell culture; for a complete listing, check the catalog at **www.corning.com/lifesciences**.



3707 and 3712
384 Well Clear Bottom Plates

384 Well Cell Culture Plate Ordering Information

Cat. No.	Description	Surface	Qty/Pk	Qty/Cs
Clear Plates				
3701	Standard clear plate, low flange	TC	20	100
3662	Standard clear plate	Poly-D-lysine	25	100
White Plates				
3570	Solid white plate	TC	10	50
3707	White plate with clear bottom	TC	20	100
3663	White plate with clear bottom	Poly-D-lysine	25	100
3826	Solid white plate, low volume	TC	10	50
Black Plates				
3571	Solid black plate, low flange	TC	10	50
3712	Black plate with clear bottom	TC	20	100
3664	Black plate with clear bottom	Poly-D-lysine	25	100
3683	Black plate with clear bottom	Corning CellBIND Surface	10	50
3542	Low volume, black plate with clear bottom	TC	10	50
3822	Low volume, solid black plate	TC	10	50
3985	Black optical imaging plate with clear bottom	TC	20	100

Well Dimensions, Expected Cell Yields, and Recommended Medium Volumes

Cell Culture Plates	Well Diameter (Bottom, mm)	Single Well Only: Approx. Growth Area (cm²)	Single Well Only: Average Cell Yield*	Single Well Only: Total Well Volume (mL)	Single Well Only: Working Volume (mL)	Entire Plate: Approx. Growth Area (cm²)	Entire Plate: Average Cell Yield*	Entire Plate: Working Volume (mL)
Standard 384 Well	2.7 x 2.7†	0.056	5.6×10^3	0.125	0.025 - 0.050	21.5	2.15×10^6	9.6 - 19.2
Low Volume 384 Well	2.0	0.031	3.1×10^3	0.050	0.005 - 0.040	12.0	1.2×10^6	1.9 - 15.3

*Assumes an average yield of 1×10^5 cells/cm² from a 100% confluent culture. Yields from many cell types can be lower than this.
†These wells are square.

1536 Well Cell Culture Plates

- Superior performance compared to competitor plates: lower CVs, higher signal-to-noise ratios, and lower background fluorescence
- Compatible with bar coding, standard readers and automation
- Recommended working volume of up to 8 µL
- Treated for optimal cell attachment
- Flat bottoms and lids
- Sterilized by gamma radiation
- Certified nonpyrogenic

Black plates are designed to lower background in fluorescent assays and reduce crosstalk. White plates are designed for luminescent assays. Corning offers other 1536 well plate types for applications other than cell culture; for a complete listing, check the catalog at **www.corning.com/lifesciences**.

1536 Well Cell Culture Plate Ordering Information

Cat. No.	Description	Surface	Qty/Pk	Qty/Cs
Clear Plates				
3853	Standard clear plate	TC	20	100
White Plates				
3727	Solid white plate	TC	10	50
3855	Solid white plate, low volume	TC	20	100
Black Plates				
3726	Solid black plate	TC	10	50
3893	Black clear bottom plate	TC	10	50
3854	Solid black plate, low volume	TC	20	100

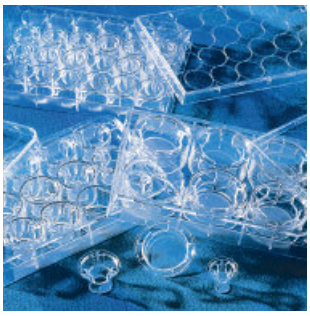
3893 1536 Well Culture Plates

Well dimensions, Expected Cell Yields, and Recommended Medium Volumes

Cell Culture Plates	Well Diameter (Bottom, mm)	Single Well Only: Approx. Growth Area (cm²)	Single Well Only: Average Cell Yield*	Single Well Only: Total Well Volume (µL)	Single Well Only: Working Volume (µL)	Entire Plate: Approx. Growth Area (cm²)	Entire Plate: Average Cell Yield*	Entire Plate: Working Volume (mL)
1536 Well Clear Flat Bottom	1.63 x 1.63	0.025	2.5×10^3	12.5	5 - 8	38.3	3.8×10^6	7.7 - 15.4
1536 Well Solid Flat Bottom	1.53 x 1.53	0.023	2.3×10^3	12.5	5 - 8	35.3	3.5×10^6	7.7 - 15.4

*Assumes an average yield of 1×10^5 cells/cm² from a 100% confluent culture. Yields from many cell types can be lower than this.

Transwell® Permeable Supports



Transwell cell culture inserts are convenient, easy-to-use permeable support devices for the study of both anchorage-dependent and anchorage-independent cell lines

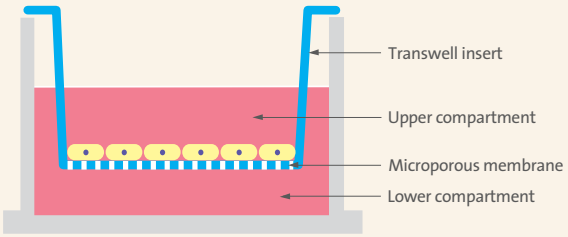
- Designed to produce a cell culture environment that closely resembles the *in vivo* state
- Allows polarized cells to feed basolaterally and thereby carry out metabolic activities in a more natural fashion
- Unique patented self-centered hanging design prevents medium wicking between the insert and outer well
- Permits access to the lower compartment through windows in the insert wall
- Suspended design allows for undamaged co-culturing of cells in the lower compartment
- Available in a range of pore sizes and different membranes to satisfy diverse experimental requirements

Characteristics of Transwell Membranes

Characteristics	Polyester (PET)	Polycarbonate	PTFE/Collagen
Optical properties	Clear	Translucent	Clear when wet
Cell visibility	Good	Poor	Cell outlines
Tissue culture treated	Yes	Yes	No
Membrane thickness	10 µm	10 µm	50 µm
Matrix/ECM coatable	Yes	Yes	Yes
Collagen treated	No	No	Yes
Available Pore Sizes (µm)	0.4, 1.0, 3.0, 8.0	0.4, 3.0, 5.0, 8.0	0.4, 3.0

Chemical Compatibility

All of the Transwell membranes are compatible with histological fixatives including methanol and formaldehyde. The polyester Transwell membranes have the best overall chemical resistance. These membranes (but not the polystyrene housings) are compatible with many alcohols, amines, esters, ethers, ketones, oils and some solvents, including many halogenated hydrocarbons and DMSO but are not recommended for use with strong acids and bases.



Pore Density

Of the three types of Transwell membranes, only the PTFE does not have a defined pore density because it is a tortuous path membrane. The two membranes with a nominally defined pore density are polycarbonate and polyester. The polyester Transwell membranes do not have as high a pore density as the polycarbonate Transwell but have better optical clarity as a result. The nominal pore densities for Corning® Polycarbonate and Polyester (PET) membranes are given in the following table.

Transwell Permeable Supports Tip

Check the Corning web site **(www.corning.com/lifesciences)** for an extensive list of references, listed by application, citing the use of Transwell permeable supports in cell culture research.

Packaging of Transwell Polycarbonate and Polyester Membrane Inserts

The cell culture inserts come prepackaged in the appropriate multiple well plate as follows:

- 24 mm diameter inserts are packaged 6 inserts in a 6 well plate, four 6 well plates per case, for a total of 24 inserts.
- 12 mm diameter inserts are packaged 12 inserts in a 12 well plate, four 12 well plates per case, for a total of 48 inserts.
- 16.5 mm diameter inserts are packaged 12 inserts in a 24 well plate, four 24 well plates per case, for a total of 48 inserts.

All Transwell-COL collagen coated inserts are individually packaged and each case includes the appropriate multiple well plate.

3401 12 mm Polycarbonate Transwell Insert

3419 75mm Polycarbonate Transwell Insert

Nominal Pore Densities for Transwell Polyester and Polycarbonate Membranes

Pore Size	Nominal Pore Density: Polycarbonate Membrane Transwell (pores/cm²)	Nominal Pore Density: Transwell-Clear Polyester Membrane (pores/cm²)
0.4 µm	1×10^8	4×10^6
1.0 µm	n/a	1.6×10^6
3.0 µm	2×10^6	2×10^6
5.0 µm	4×10^5	n/a
8.0 µm	1×10^5	1×10^5

Growth Areas and Recommended Medium Volumes for Transwell Permeable Supports

Multiple Well Plate or DishType	Transwell Insert Diameter (mm)	Insert Membrane Growth Area (cm²)	Volume Added per Plate Well	Volume Added to Inside of Transwell Insert (mL)
HTS 96	4.26	0.143	0.235	0.075
HTS 24	6.5	0.33	0.6	0.1
24 well	6.5	0.33	0.6	0.1
12 well	12	1.12	1.5	0.5
6 well	24	4.67	2.6	1.5
100 mm dish	75	44	13	9

Transwell® Polycarbonate Membrane Insert

- 10 µm thick translucent membrane
- Pore sizes ranging from 0.4 µm to 8 µm diameters
- Treated for optimal cell attachment
- Supplied in multiple well plates
- Membrane must be stained for cell visibility
- Sterilized by gamma radiation

Transwell Polycarbonate Membrane Permeable Support Ordering Information

Cat. No.	Membrane Diameter (mm)	Growth Surface Area (cm²)	Membrane Pore Size (µm)	Tissue Culture Treated	Inner Packaging*	Inserts/ Cs
3413	6.5	0.33	0.4	Yes	12/plate*	48
3415	6.5	0.33	3.0	Yes	12/plate*	48
3421	6.5	0.33	5.0	Yes	12/plate*	48
3422	6.5	0.33	8.0	Yes	12/plate*	48
3401	12	1.12	0.4	Yes	12/plate	48
3402	12	1.12	3.0	Yes	12/plate	48
3412	24	4.67	0.4	Yes	6/plate	24
3414	24	4.67	3.0	Yes	6/plate	24
3428	24	4.67	8.0	Yes	6/plate	24
3419	75	44	0.4	Yes	1/dish	12
3420	75	44	3.0	Yes	1/dish	12

*6.5 mm membrane diameter are packaged 12 inserts in a 24 well plate, 4 plates per case.

Corning® Transwell® Invasion Inserts

Transwell Polycarbonate Membrane Insert Coated with Cultrex® Basement Membrane Extract

3458 6.5 mm Polycarbonate Transwell Cultrex Insert

- 8 µm pore size membrane, 10 µm thick
- Coated with Cultrex basement membrane extract
- For cell invasion assays
- Supplied in 2-24 well plates, 12 inserts per plate

Transwell Cultrex Polycarbonate Membrane Permeable Support Ordering Information

Cat. No.	Membrane Diameter (mm)	Growth Surface Area (cm²)	Membrane Pore Size (µm)	Tissue Culture Treated	Inner Packaging	Inserts/ Cs
3458	6.5	0.33	0.8	Yes	12/plate	24

Transwell-Clear Polyester Membrane Insert

3450 24 mm Transwell-Clear Insert

- 10 µm transparent membrane
- Treated for optimal cell attachment
- Excellent visibility under phase contrast microscopy
- Supplied in multiple well plates
- Sterilized by gamma radiation

Transwell-Clear Insert Ordering Information

Cat. No.	Membrane Diameter (mm)	Growth Surface Area (cm²)	Membrane Pore Size (µm)	Inner Packaging*	Inserts/Cs
3450	24	4.67	0.4	6/plate	24
3452	24	4.67	3.0	6/plate	24
3460	12	1.12	0.4	12/plate	48
3462	12	1.12	3.0	12/plate	48
3470	6.5	0.33	0.4	12/plate*	48
3472	6.5	0.33	3.0	12/plate*	48

*6.5 mm membrane diameter are packaged 12 inserts in a 24 well plate, 4 plates per case.

Transwell-COL Collagen-Coated Membrane Insert

3491 24 mm Transwell-COL Collagen-Coated Insert

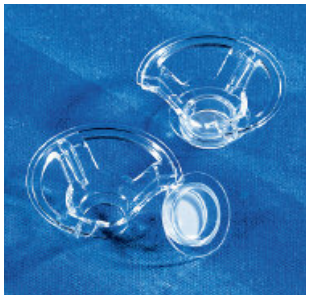
- Transparent collagen treated PTFE membrane
- Promotes cell attachment and spreading
- Equimolar mixture of types I and III collagen
- Individually packaged
- Multiple well plates included in each case
- Supplied sterile

Transwell-COL Insert Ordering Information

Cat. No.	Membrane Diameter (mm)	Growth Surface Area (cm²)	Membrane Pore Size (µm)	Inner Packaging	Multiple Well Plate	Inserts/Cs
3491	24	4.67	0.4	Individual	6 well	24
3492	24	4.67	3.0	Individual	6 well	24
3493	12	1.12	0.4	Individual	12 well	24
3494	12	1.12	3.0	Individual	12 well	24
3495*	6.5	0.33	0.4	Individual	24 well	24
3496*	6.5	0.33	3.0	Individual	24 well	24

*Includes twenty-four 6.5 mm inserts packaged separately with two 24 well plates.

Snapwell™ Inserts



3407 12 mm Snapwell Inserts

- A modified Transwell permeable support containing a 12 mm diameter membrane supported by a detachable ring
- Once cells are grown to confluence on the Snapwell insert, the ring can be placed in a vertical or horizontal diffusion chamber*
- Sterilized by gamma radiation
- Packaged in 6 well plates

Snapwell Insert Ordering Information

Cat. No.	Membrane Pore Size (µm)	Membrane	Inner Packaging	Inserts/Cs
3407	0.4	Polycarbonate	6/plate	24
3802	3.0	Polycarbonate	6/plate	24
3801	0.4	Clear Polyester	6/plate	24

*Diffusion Chambers are available through Harvard Apparatus (*www.harvardapparatus.com*)

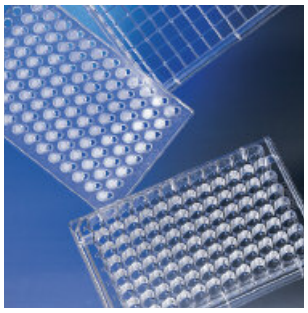
Corning® HTS Transwell®-24 Well Permeable Supports

HTS Transwell-24 Well Permeable Support

- The HTS Transwell-24 Well Permeable Support has an array of 24 wells with membrane inserts connected by a rigid, robotics-friendly tray that enables all 24 Transwell supports to be handled as a single unit
- Cell growth area is 0.33 cm^2/well
- Choice of either polyester (PET) membrane (0.4 µm pore size) or polycarbonate (PC) membrane (0.4 µm, 3.0 µm pore sizes)
- Treated for optimal cell attachment
- Individual pack has 2 HTS Transwell-24 units loaded into two open reservoir trays and two individually wrapped 24 well plates
- Bulk pack has 12 HTS Transwell-24 units loaded into 24 well plates only. Reservoirs may be purchased separately
- Sterilized by gamma radiation

HTS Transwell-24 Well Permeable Supports Ordering Information

Cat. No.	Description	Membrane Pore Size (µm)	Membrane	Qty/Pk	Plates/Cs
3396	HTS Transwell-24, individual	0.4	PC	1	2
3397	HTS Transwell-24, bulk	0.4	PC	12	12
3398	HTS Transwell-24, individual	3.0	PC	1	2
3399	HTS Transwell-24, bulk	3.0	PC	12	12
3395	HTS Transwell nontreated reservoir	–	–	12	48
3378	HTS Transwell-24, bulk	0.4	PET	12	12
3379	HTS Transwell-24, individual	0.4	PET	1	2



HTS Transwell-96 System

Corning® HTS Transwell®-96 Well Permeable Support Systems and Plates

- The HTS Transwell-96 Well Permeable Support has an array of 96 wells with membrane inserts connected by a rigid, robotics-friendly tray that enables all 96 inserts to be handled as a single unit
- Choice of either polyester (PET) membrane (1.0 µm, 8.0 µm pore sizes) or polycarbonate (PC) membrane (0.4 µm, 3.0 µm, 5.0 µm pore sizes)
- 0.143 cm^2 membrane area per well, providing 20 to 50% more surface area for cell growth than other commercially available systems
- Large apical and basolateral access ports allow efficient media sampling and facilitate automated or manual access
- Optimized for automation, with multichannel feeder ports, improved gripping surface, and standard bar codes
- The reservoir plate allows for simultaneous feeding of 96 wells and comes with a removable media stabilizer to reduce the risk of spills during handling
- The receiver plate isolates each well to enable 96 individual assays
- Sterilized by gamma radiation
- The HTS Transwell-96 Systems (0.4 µm PC and 1.0 µm PET) are packaged with the 96 well insert plate in a reservoir plate and includes the 96 well receiver plate with lid.
- The HTS Transwell-96 Well Plates (3.0 and 5.0 µm PC, 8.0 µm PET) are packaged with the 96 well insert plate in the 96 well receiver plate with lid. Reservoir plates may be purchased separately.

HTS Transwell®-96 Well Permeable Supports Ordering Information

Cat. No.	Description	Membrane Pore Size (µm)	Membrane	Qty/ Pk	Qty/ Cs
3381	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	0.4	PC	1	1
3391	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	0.4	PC	1	5
3380	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	1.0	PET	1	1
3392	HTS Transwell-96 System, reservoir and receiver plates with 2 lids	1.0	PET	1	5
3385	HTS-Transwell-96 Well Plate, receiver plate and lid, individual	3.0	PC	1	2
3386	HTS-Transwell-96 Well Plate, receiver plate and lid, bulk	3.0	PC	4	8
3387	HTS-Transwell-96 Well Plate, receiver plate and lid, bulk	5.0	PC	4	8
3388	HTS-Transwell-96 Well Plate, receiver plate and lid, individual	5.0	PC	1	2
3374	HTS-Transwell-96 Well Plate, receiver plate and lid, individual	8.0	PET	1	2
3384	HTS-Transwell-96 Well Plate, receiver plate and lid, bulk	8.0	PET	4	8
3382	HTS Transwell-96 receiver plate with lid, tissue culture treated	n/a	n/a	10	10
3383	HTS Transwell-96 reservoir plate with removable media stabilizer and lid, not treated	n/a	n/a	10	10
3583	HTS Transwell-96 black receiver plate with lid, tissue culture treated	n/a	n/a	10	10

Netwell™ Inserts

Netwell Inserts

- Costar® Netwell inserts have polyester mesh bottoms attached to polystyrene rings or housing
- They are used as tissue carriers, supports and strainers for culture of small organs, tissue slices or explants at the air-media interface
- Handy carrier for immunocytochemical staining of tissue slices (see accessories below)
- Provides coarse filtration of tissue homogenates, cell suspensions and microcarriers
- Available in two mesh sizes and diameters
- Supplied sterile and preloaded in 6- or 12-well plates
- 24 mm Netwell inserts fit in Corning® 50 mL plastic centrifuge tubes

Netwell Inserts Ordering Information

Cat. No.	Membrane Dia. (mm)	Polyester Membrane Mesh Size (µm)	Sterile	Inner Packaging	Inserts/ Cs
3477	15	74	Yes	12/plate	48
3478	15	500	Yes	12/plate	48
3479	24	74	Yes	6/plate	48
3480	24	500	Yes	6/plate	48

Netwell Accessories

Netwell Accessories

- Specially designed Netwell carriers and handles allow simultaneous processing of up to 12 samples per carrier
- Polystyrene reagent trays are available in white for colorimetric reaction contrast, or black for better visibility of tissue sections
- Each carrier kit contains eight carriers and eight handles

Netwell Accessories Ordering Information

Cat. No.	Description	Qty/Cs
3517	Netwell Reagent Tray, black	200
3519	Netwell Reagent Tray, white	200
3520	Netwell Carrier Kit, 15 mm	8
3521	Netwell Carrier Kit, 24 mm	8

Culture Tubes

Culture Tubes

430172 Culture Tube

- Manufactured from optically clear polystyrene
- Threaded plug seal caps prevent leakage
- Cell culture treated tubes supplied racked
- Untreated tubes provided bulk packed
- Sterilized by gamma radiation
- Certified nonpyrogenic

Culture Tube Ordering Information

Cat. No.	Treated	Size (mm)	Cap Style	Qty/Pk	Qty/Cs
430157	No	16 x 125	Screw Top	25	500
430172	Yes	16 x 125	Screw Top	50	500

Roller Bottles

430849 850 cm² Roller Bottle

Roller Bottle Application Tips

- Corning recommends 0.2 to 0.3 mL of medium per cm^2 of growth area.
- Corning recommends setting roller rack speeds to provide 0.5 to 1.0 RPM.

430852 Expanded Surface Roller Bottle

Roller Bottles

- Manufactured from virgin polystyrene
- Treated for optimal cell attachment
- One piece seamless construction
- Most bottles have graduations.
- All bottles have printed lot numbers to aid in product traceability.
- Sterilized by gamma radiation
- Certified nonpyrogenic

Roller Bottle Ordering Information

Cat. No.	Surface	Surface Area (cm²)	Cap Style	Graduations	Qty/Pk	Qty/Cs
430195	TC	490	Plug Seal	No	2	40
430699	TC	1,750	Easy Grip	Yes	10	20
430849	TC	850	Easy Grip	Yes	2	40
431133	TC	850	Easy Grip	Yes	20	20
431198	TC	850	Easy Grip Vent	Yes	2	40
430851	TC	850	Easy Grip	Yes	5	40
431318	TC	850	Easy Grip	No	20	80
431321	TC	850	Easy Grip	Yes	22	44
3907	Corning® CellBIND® Surface	850	Easy Grip	Yes	2	40
431329	Corning CellBIND Surface	850	Easy Grip Vent	Yes	2	40
431344	Corning CellBIND Surface	850	Easy Grip	Yes	22	44

Expanded Surface Roller Bottles

- Same features as standard roller bottles
- Ribbed design provides twice the surface area with the same exterior dimensions

Expanded Surface Roller Bottle Ordering Information

Cat. No.	Surface	Surface Area (cm²)	Cap Style	Graduations	Qty/Pk	Qty/Cs
430852	TC	1,700	Easy Grip	Yes	2	40
430853	TC	1,700	Easy Grip	Yes	5	40
431134	Corning CellBIND Surface	1,700	Easy Grip	Yes	20	20
431135	TC	1,700	Easy Grip	Yes	20	20
431191	TC	1,700	Easy Grip Vent	Yes	20	20

Expected Cell Yields and Recommended Medium Volumes

Corning Roller Bottles	Approximate Growth Area (cm²)	Average Cell Yield*	Recommended Medium Volume (mL)
490 cm^2 roller bottle	490	4.9×10^7	100 - 150
850 cm^2 roller bottle	850	8.5×10^7	170 - 255
1700 cm^2 roller bottle	1,700	1.7×10^8	340 - 510
1750 cm^2 roller bottle	1,750	1.75×10^8	350 - 525

*Assumes an average yield of 1×10^5 cells/cm^2 from a 100% confluent culture. Yields from many cell types can be lower than this.

Easy Grip Cap features large knurls designed for ergonomic handling.

Easy Grip Vent Cap is designed for applications requiring consistent gas exchange.

Plug Seal Cap, designed for use in closed systems, provides a liquid- and gas-tight seal. When loosened, this cap can be used in open systems.

Polyethylene Roller Bottle Caps

Caps are sold separately and are available individually wrapped in either Easy Grip or Easy Grip Vent Cap designs.

Cat. No.	Cap Style	Qty/Pk	Qty/Cs
430698	Easy Grip	1	100
431132	Easy Grip Vent	1	300

Corning is committed to partnering with you, our customer, to provide solutions that increase your efficiency and productivity. We offer the ability to customize packaging and cap design to meet your specific requirements. Minimum order quantities apply. Please call us or contact your local Corning Office for more details. See back cover for contact information.

HYPER*Flask*™ Cell Culture Vessel

The new Corning HYPER*Flask* Vessel offers 1720 cm^2 growth area in the footprint of a traditional 175 cm^2 flask. This high yield, high performance flask utilizes a multilayered gas permeable growing surface for efficient gas exchange.

Cat. No.	Description	Qty/Pk	Qty/Cs
10010	HYPER*Flask* Vessel, 1720 cm^2, Corning CellBIND Surface, Bar Code, Sterile	4	4
10024	HYPER*Flask* Vessel, 1720 cm^2, Corning CellBIND Surface, Bar Code, Sterile	4	24

Corning® CellSTACK® Culture Chambers

Corning CellSTACK Culture Chambers

- Available in Five Sizes
  - 1-Stack with 636 cm^2 cell growth area
  - 2-Stack with 1,272 cm^2 cell growth area
  - 5-Stack with 3,180 cm^2 cell growth area
  - 10-Stack with 6,360 cm^2 cell growth area
  - 40-Stack with 25,440 cm^2 cell growth area
- Choice of traditional surface treatment, new Corning CellBIND® Surface for enhanced cell attachment, or Ultra-Low Attachment Surface for reduced cell attachment
  - Great for reducing serum levels
  - Better attachment increases cell yields
  - May eliminate need for expensive coatings
- Greater Chamber Durability
  - Superior mechanical strength and structural integrity
  - Self venting caps prevent pressure build-up during transport
  - 100% leak tested prior to shipping
- Greater Cleanliness
  - Improved assembly procedures reduce particulates
  - Certified nonpyrogenic and sterilized by gamma irradiation
- Continuous Supply Reliability
  - Manufactured in USA under GMP conditions
- Easier to Use
  - Larger openings with threaded closures and vented caps
  - Footprint identical to competitor's product

CellSTACK Chamber, 40-Stack

Corning CellSTACK Culture Chambers Ordering Information

Cat. No.	Surface	Growth Area (cm2)	Description	Qty/ Pk	Pk/ Cs
3330	Corning CellBIND Surface	636	CellSTACK-1 Chamber	1	8
3268	TC	636	CellSTACK-1 Chamber	1	8
3310	Corning CellBIND Surface	1,272	CellSTACK-2 Chamber	1	5
3269	TC	1,272	CellSTACK-2 Chamber	1	5
3311	Corning CellBIND Surface	3,180	CellSTACK-5 Chamber	1	2
3319	TC	3,180	CellSTACK-5 Chamber	1	2
3313	TC	3,180	CellSTACK-5 Chamber	1	8
3320	Corning CellBIND Surface	6,360	CellSTACK-10 Chamber	1	6
3312	Corning CellBIND Surface	6,360	CellSTACK-10 Chamber	1	2
3270	TC	6,360	CellSTACK-10 Chamber	1	2
3271	TC	6,360	CellSTACK-10 Chamber	1	6
3321	Corning CellBIND Surface	25,440	CellSTACK-40 Chamber	1	2
3272	TC	25,440	CellSTACK-40 Chamber	1	2
3303	Ultra-Low Attachment Surface	636	CellSTACK-1 Chamber	1	8

Corning® CellSTACK® Accessories are Simply Better!

Corning offers a variety of accessories to simplify handling and reduce contamination risks when processing CellSTACK Chambers.

For Better Filling

A variety of optional filling caps are available to allow direct aseptic transfer of media and cells via pumping or gravity feed. Several coupling devices are available on these filling caps with or without integrally sealed USP Class VI certified C-Flex® tubing. Optional filling caps with attached filters with hydrophobic membranes provide for gas exchange and faster aseptic venting during liquid transfers. Extra sterile vented or unvented 33 mm replacement caps are also available.

For Better Stacking

Reuable stacking devices fit between CellSTACK Chambers to keep them level and optimize incubator space while providing clearance for gas exchange.

For Better Options

Sometimes, currently available accessories just don't fit a customer's needs. This is why Corning will work with you to design a CellSTACK Chamber accessory that will make your work flow process more efficient and reliable.

For large scale production using CellSTACK-40 Chambers there are automated systems that can save on labor while increasing reliability and efficiency.

Call us to discuss your specific requirements.

CellSTACK Accessories

3328 Fill Cap, Female MPC Coupling

3281 0.2 µm Vent Cap

3284 Bacterial Air Vent

Corning CellSTACK Accessories Ordering Information

Cat. No.	Description	Qty/ Pk	Qty/ Cs
3331	Stacking device, ABS, nonsterile	1	5
3332	Universal cap*, with vented overcap, sterile	1	4
3969	Solid cap, sterile	1	6
3968	Vent cap, 0.2 mm membrane, sterile	1	6
3281	Vent cap, 3/8" (9.5 mm) ID tubing, 7 cm length, Pall® Acro 50, PVDF filter, sterile	1	5
3282	Fill cap, 1/8" (3.2 mm) ID tubing, female luer lock with male luer plug, sterile	1	5
3283	Fill cap, 3/8" (9.5 mm) ID tubing and 5/16" (7.94 mm) barbed fitting, sterile	1	5
3284	Vent cap, 3/8" (9.5 mm) ID tubing, 7 cm length, Pall Bacterial Air Vent, sterile	1	4
3324	Two vented over caps and one solid over cap for the Universal Cap, sterile	5	100
3333	Fill cap*, 1/4" (6.4 mm) ID tubing, 70 cm length, male MPC coupling with female end cap, sterile	1	4
3328	Fill cap, female MPC coupling, 1/4" (6.4 mm) ID barbed fitting with male end cap, sterile	1	4
3329	Fill cap, female MPC coupling, 3/8" (9.5 mm) ID barbed fitting with male end cap, sterile	1	4
3334	Fill cap, male MPC coupling, 1/4" (6.4 mm) ID barbed fitting with female end cap, sterile	1	4
3339	Fill cap, male MPC coupling with male end cap, 3/8" (9.5 mm) ID barbed fitting with female end cap, sterile	1	4

*All caps are 33 mm thread caps.

3333 Fill Cap, Male MPC Coupling

3331 Stacking Device

3332 Universal Cap

CellCube® Systems

The CellCube System provides a fast, simple, and compact method for the mass culture of attachment-dependent cells. It uses a tissue culture treated growth surface for cell attachment, and continually perfuses the cells with fresh medium for increased cell productivity. The CellCube System is comprised of four pieces of capital equipment: the system controller, oxygenator, pump tower, and circulation pump, and is designed to use disposable CellCube Modules. Performance data from the CellCube System can be easily scaled to the production system. Please inquire about CellCube System pricing. Corning provides on-site technical support for the CellCube System.

The CellCube Modules provide a traditional tissue culture treated surface or new Corning® CellBIND® Surface for the growth of attachment dependent cells. The CellCube System provides an environment which more closely simulates *in vivo* conditions and reliably distributes nutrients and oxygen with low differential gradients across all cells within the modules.

CellCube System Ordering Information

Cat. No.	Description	Qty/Cs
3040	CellCube 6 Liter Oxygenator, Process Scale	1
3041	CellCube 6 Liter Oxygenator, Production Scale	1
3020	CellCube Set Up Kit, Bioprene® Tubing, Process Scale	1
3021	CellCube Set Up Kit, Bioprene Tubing, Production Scale	1
3022	CellCube Set Up Kit, Sta-Pure Tubing, Process Scale	1
3023	CellCube Set Up Kit, Sta-Pure Tubing, Production Scale	1
3101	CellCube Single Module System 6 Liter Oxygenator, Complete	1
3139	CellCube Single Module System Secondary Oxygen Probe (25 x 70 mm)	1
3138	CellCube Single Module System Secondary Oxygen Probe Holder	1
3144	CellCube Single Module System Oxygen Probe Cable	1
3165	CellCube Single Module System 12 mm Dissolved Oxygen Probe Membrane Kit	1
3166	CellCube System 25 mm Dissolved Oxygen Probe Membrane Kit	1
3136	CellCube Single Module System Stainless Steel Stand	1
3135	CellCube Single Module System Setup Kit	1
3200	CellCube 10-Stack Module (8,500 cm^2), Tissue Culture Treated	2
3201	CellCube 25-Stack Module (21,250 cm^2), Tissue Culture Treated	1
3304	CellCube 25-Stack Module (21,250 cm^2), Corning CellBIND Surface	1
3264	CellCube 100-Stack Module (85,000 cm^2), Tissue Culture Treated	1
3302	CellCube 100-Stack Module (85,000 cm^2) Corning CellBIND Surface	1

Corning E-Cube™ Culture System

Corning E-Cube Culture System

The E-Cube system provides a simple method to determine if your cells will grow in the CellCube module prior to investing in the resources and funding that would be necessary for the larger, automated CellCube system.

Corning E-Cube Culture System Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
3286	E-Cube System Kit (without CellCube module)	1	1
3200	CellCube Module 10-Stack	1	2

Corning E-Cube Culture System Accessories Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
430518	1 L Storage Bottle with cap	2	24
401654	45 mm Cap with 2 stainless steel ports	1	1
3287	E-Cube Fittings	1	1

Spinner Flasks

3152 and 3153
Disposable Spinner Flasks

3561 and 3563
Disposable Spinner Flasks

Corning® Disposable Spinner Flasks

- The Corning disposable spinner flask system comes ready-to-use with paddle and integrated magnet, eliminating the need for time-consuming assembly or cleaning and reassembly
- Molded from virgin polystyrene and gamma-irradiated, each spinner flask system assures a clean sterile unit. No more concerns with detergent residues or contamination
- Made of ISO 10993 compliant polystyrene, the vessel is comparable to conventional glass spinner flasks for growth of suspension cell lines and any attachment-dependent cultures using microcarrier beads. The 1L and 3L impellers are made of ISO 10993 compliant polypropylene.
- The paddle size and height is optimized for each vessel size. A unique integrated magnet provides smooth, even rotation at required speeds on slow-speed stirrers. Heat build-up in the vessel is reduced by means of a specially designed flange that raises the vessel off the stir-plate surface for the 125 mL and 500 mL flasks only.

Corning Disposable Spinner Flasks Ordering Information

Cat. No.	Description	Capacity (mL)	Center Neck (mm)	Sidearm Neck (mm)	Qty/Cs
3152	Disposable Spinner Flask	125	70	25	12
3153	Disposable Spinner Flask	500	100	45	12
3561	Disposable Spinner Flask	1000	-	45	6
3563	Disposable Spinner Flask	3000	-	45	4
3569	Disposable Spinner Flask with accessory attached	1000	-	45	6

Replacement Caps and Aseptic Transfer Caps

Cat. No.	Description	Capacity (mL)	Sidearm Neck (mm)	Qty/Cs
3567	Vent Cap, 0.2 µm Vent	500, 1000, 3000	45	4
3565	Side Arm Aseptic Transfer Cap, DipTube w/ 0.2 µm Vent, MLL	500	45	2
3562	Side Arm Aseptic Transfer Cap, DipTube w/ 0.2 µm Vent, MLL	1000	45	2
3564	Side Arm Aseptic Transfer Cap, DipTube w/ 0.2 µm Vent, MLL	3000	45	2

1L and 3L Disposable Spinner Flasks with Accessories

3565, 3562 and 3564
Aseptic Transfer Cap

3567 Vent Cap

4500-1L and 4500-250
Spinner Flasks

ProCulture Spinner Flasks

ProCulture® Glass Spinner Flask with Angled Sidearms

- Baffles enhance aeration and agitation of contents of the flask.
- Unique impeller design ensures optimal stirring.
- Sidearm designs permit easy access of 25 mL and 50 mL pipettes
- Visit **www.corning.com/lifesciences** to view additional Corning spinner flask accessories

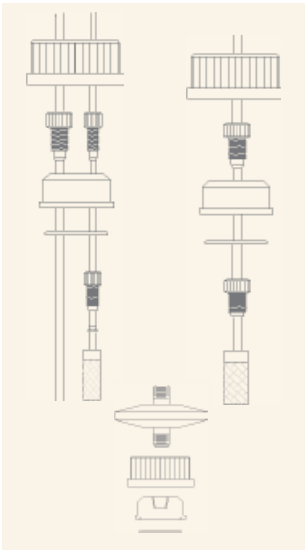
ProCulture Spinner Flasks with Angled Sidearms Ordering Information

Cat. No.	Description	Capacity	Center Neck (mm)	Sidearm Neck (mm)	Qty/Cs
4500-125	Spinner	125 mL	70	32	1
4500-250	Spinner	250 mL	70	32	1
4500-500	Spinner	500 mL	100	45	1
4500-1L	Spinner	1L	100	45	1
4500-3L	Spinner	3L	100	45	1
4500-6L	Spinner	6L	100	45	1
4500-8L	Spinner	8L	100	45	1
4500-15L	Spinner	15L	100	45	1
4500-36L	Spinner	36L	100	45	1
4502-3L	Spinner	3L	120	45	1
4502-6L	Spinner	6L	120	45	1
4502-8L	Spinner	8L	120	45	1
4502-15L	Spinner	15L	120	45	1
4502-36L	Spinner	36L	120	45	1
4504-3L	Spinner	3L	140	45	1
4504-6L	Spinner	6L	140	45	1
4504-8L	Spinner	8L	140	45	1
4504-15L	Spinner	15L	140	45	1
4504-36L	Spinner	36L	140	45	1

Retrofit Kits are available for converting older Corning® ProCulture Spinner Flasks to fit newer dual-bearing impellers.

ProCulture Spinner Flasks with Vertical Sidearms Ordering Information

Cat. No.	Capacity	Center Neck (mm)	Number of Vertical Sidearms	Sidearm Neck (mm)	Qty/Cs
4510-8L	8L	100	4	45	1
4510-15L	15L	100	4	45	1
4510-36L	36L	100	6	45	1
4512-8L	8L	120	4	45	1
4512-15L	15L	120	4	45	1
4512-36L	36L	120	6	45	1
4514-15L	15L	140	4	45	1
4514-36L	36L	140	6	45	1

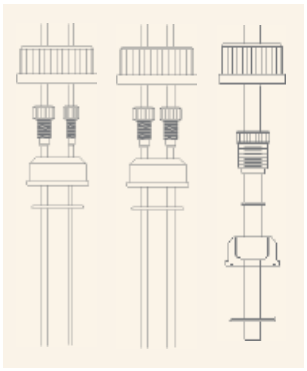


Vertical Sidearm Fittings, Gas Delivery and Venting

Gas Handling Fittings, Vertical Sidearm Flasks

- Used to provide gases into larger spinner flasks with vertical sidearms
- Fittings are comprised of a PET insert with a Viton® O-Ring and a polypropylene sealing cap
- Gas filters are PTFE, 0.2 µm porosity
- The 316 stainless steel tubes are held in place by Noryl® nuts with integrated ferrules
- The fittings are completely autoclavable

Cat. No.	Description	Dimension	Qty/Cs
4519-100	Sidearm fitting, gas delivery	1/8" Inlet	1
4519-102	Sidearm fitting, gas delivery	1/4" Inlet	1
4519-104	Sidearm fitting, delivery and vent	1/8" and 1/4"	1
4519-106	Sidearm fitting, vent cap, 0.2 µm	50 mm filter	1
4519-177	Sidearm fitting, vent cap, 0.2 µm, Sanitary	50 mm filter	1

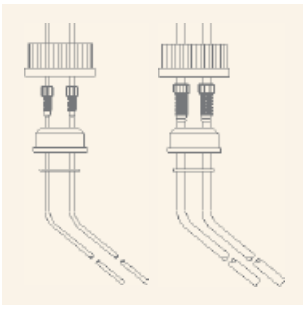


Vertical Sidearm Fittings, Media Handling

Media Handling Fittings, Vertical Sidearm Flasks

- Used to introduce medium aseptically into large spinner flasks with vertical sidearms
- Fittings are comprised of a PET insert with a Viton O-Ring and a polypropylene sealing cap
- Gas filters are PTFE, 0.2 µm porosity
- The 316 stainless steel tubes are held in place by Noryl nuts with integrated ferrules
- The fittings are completely autoclavable

Cat. No.	Description	Fits Flask Size	Tubing O.D. (inches)	Qty/ Case
4519-112	Sidearm fitting, dual, media handling	8L, 15L	1/8"	1
4519-114	Sidearm fitting, dual, media handling	36L	1/8"	1
4519-116	Sidearm fitting, dual, media handling	8L, 15L	1/4"	1
4519-118	Sidearm fitting, dual, media handling	36L	1/4"	1
4519-120	Sidearm fitting, combo, media handling	8L, 15L	1/8", 1/4"	1
4519-122	Sidearm fitting, combo, media handling	36L	1/8", 1/4"	1
4519-124	Sidearm fitting, single, media handling	8L,15L	1/2"	1
4519-126	Sidearm fitting, single, media handling	36L	1/2"	1
4519-176	Sidearm fitting, dual, media handling, EPDM	8L, 15L	1/4"	1

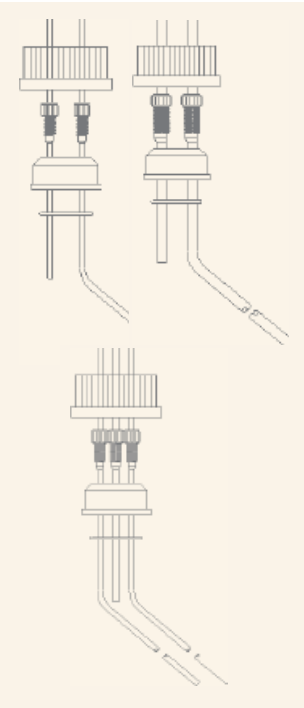


Dual Angled Sidearm Fittings

Gas or Media Handling Fittings, Angled Sidearm Flasks, Dual Style

- Dual angled sidearm fittings can be used for aseptically transferring medium into or out of angled sidearm spinner flasks or for sparging the medium with gases
- Fittings are comprised of a PET insert with a Viton O-ring and a polypropylene sealing cap
- Two 316 stainless steel tubes which extend to the bottom of the flask, are held in place by Noryl nuts with integrated ferrules
- The fittings are completely autoclavable

Cat. No.	Description	Flask Size	Tubing O.D. (inches)	Qty/ Case
4519-150	SA fitting, Dual	1L	1/8"	1
4519-151	SA fitting, Dual	3L	1/8"	1
4519-152	SA fitting, Dual	6L	1/8"	1
4519-153	SA fitting, Dual	8L	1/8"	1
4519-173	SA fitting, Dual	1L	1/8", 1/4"	1
4519-121	SA fitting, Dual	8L	1/8", 1/4"	1
4519-174	Sidearm fitting, Dual	500 mL	1/8" angled to 125 mL level, 1/4"	1
4519-154	Sidearm fitting, Dual	1L	1/4"	1
4519-155	Sidearm fitting, Dual	3L	1/4"	1
4519-156	Sidearm fitting, Dual	6L	1/4"	1
4519-157	Sidearm fitting, Dual	8L	1/4"	1
4519-170	Sidearm fitting, Dual	15L	1/4"	1

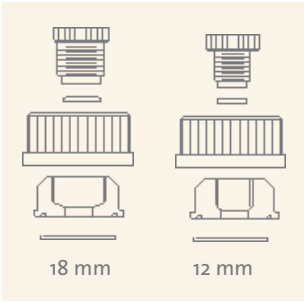


Combination and Triple Angled Sidearm Fittings

Gas or Media Handling Fittings, Angled Sidearm Flasks, Combination Style

- Used to aseptically transfer medium, sparge the cell culture medium directly or add gases to the head space above the cell culture medium
- Fittings are comprised of a PET insert with a Viton® O-ring and a polypropylene sealing cap
- One or two 316 stainless steel tubes extend to the bottom of the flask; the other is a shorter 6" length
- Both tubes are held in place by Noryl® nuts with integrated ferrules
- The fittings are completely autoclavable

Cat. No.	Description	Flask Size	Tubing O.D. (inches)	Qty/Case
4519-158	Sidearm fitting, combination	1L	1/8"	1
4519-159	Sidearm fitting, combination	3L	1/8"	1
4519-160	Sidearm fitting, combination	6L	1/8"	1
4519-161	Sidearm fitting, combination	8L	1/8"	1
4519-162	Sidearm fitting, combination	1L	1/4"	1
4519-163	Sidearm fitting, combination	3L	1/4"	1
4519-164	Sidearm fitting, combination	6L	1/4"	1
4519-165	Sidearm fitting, combination	8L	1/4"	1
4519-171	Sidearm fitting, combination	15L	1/4"	1
4519-166	Sidearm fitting, combination, triple	1L	1/8"	1
4519-167	Sidearm fitting, combination, triple	3L	1/8"	1
4519-168	Sidearm fitting, combination, triple	6L	1/8"	1
4519-169	Sidearm fitting, combination, triple	8L	1/8"	1



Sidearm Fittings for Sensors

Fittings for Insertion Probes, Vertical Sidearm Flasks

- Used to secure pH, O_2, or temperature sensors in large spinner flasks with vertical sidearms
- Fittings are comprised of a PET insert with a Viton O-ring and a polypropylene sealing cap
- The 316 sensors are held in place by Noryl nuts with integrated ferrules
- The fittings are completely autoclavable

Cat. No.	Description	Sensor O.D. (mm)	Qty/Cs
4519-108	Sidearm fitting, sensor, O_2 probes	12	1
4519-128	Sidearm fitting, sensor, temperature probes	12	1
4519-110	Sidearm fitting, sensor, pH probes	12	1
4519-172	Sidearm fitting, sensor, pH or O_2	18	1

Impeller Assembly

Impeller Assembly for Magnetically-Driven Bioreactor

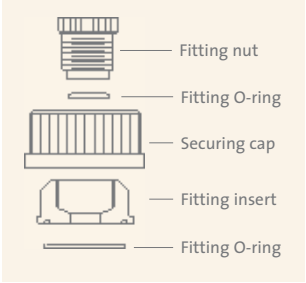
Stainless steel impeller shaft with modified impeller blade for use with probes to create a small bioreactor.

Cat. No.	Description	Qty/Cs
402648	Impeller assembly, stainless steel, dual bearing, modified for probes, 3L	1
402649	Impeller assembly, stainless steel, dual bearing, modified for probes, 6L	1
401392	Impeller assembly, stainless steel, dual bearing, modified for probes, 8L	1
401661	Impeller assembly, stainless steel, dual bearing, modified for probes, 15L	1
402650	Impeller assembly, stainless steel, dual bearing, modified for probes, 36L	1

Cap Assembly for Magnetically-Driven Bioreactor

Cap assembly for small biorecator with various fitting arrangements.

Cat. No.	Description	Qty/Cs
402579	Cap Assembly, 120 mm, Glass Filled PBT, 3 (3/8"), 1 (1/4") fittings	1
402576	Cap Assembly, 120 mm, Glass Filled PBT, 2 (12 mm), 2 (1/4") fittings	1
402577	Cap Assembly, 120 mm, Glass Filled PBT, 2 (12 mm), 2 (1/4"), 1 (3/8") fittings	1



Spare Parts for Sidearm Fittings

Securing Caps

Corning Cat. No.	Description	Qty/Cs
1395-32LTC	Cap, solid, 32 mm, orange	1
1395-45LTC	Cap, solid, 45 mm, orange	1
1395-45LTR	Drip ring, 45 mm, clear	1
1395-45LTMC	Cap, vented, securing, 45 mm, .22 PTFE, grey	10

Direct Drive Motor

Direct Drive Motors

- High torque, low rpm stirrer designed to maintain constant low speed
- Gearhead stirrer delivers 14.5 in-lbs of torque
- Maximum speed is 350 rpm
- Weight of motor is 9 lbs (4.1kg)
- Available with 120VAC 60Hz or 230VAC 50Hz

Cat. No.	Description	Qty/Cs
400640	120VAC, 60 Hz Motor	1
402645	230VAC, 50 Hz Motor	1

Direct Drive Shaft/Cap Assembly

Direct Drive Shaft/Cap Assemblies

- For 8L, 15L, or 36L paddle assemblies
- Used on all series 4510 and 4512 Spinner flasks

Cat. No.	Description	Qty/Cs
402614	For 100 mm Neck Flasks	1
400649	For 120 mm Neck Flasks	1

Direct Drive Paddle Assembly

Direct Drive Paddle Assemblies

- For series 4510, 4512, and 4514 Spinner flasks when coupled to a direct drive motor
- Paddle assemblies will couple to 100 mm and 120 mm cap assemblies

Cat. No.	Description	Qty/Cs
4515-8L	Paddle assembly only for 8L flask	1
4515-15L	Paddle assembly only for 15L flask	1
4515-36L	Paddle assembly only for 36L flask	1

Erlenmeyer Flasks

Sizes range from 125 mL to 3L for plain and baffled Erlenmeyer flasks

Unique baffled design with a molded-in "1/3 Fill" line for convenience on all baffled Erlenmeyer flasks.

Shaker Flask Application Tip

Corning recommends starting with a shaking rate of 75-125 RPM (orbital shaker) and a medium volume of 30-40% of the nominal flask capacity.

Corning® Erlenmeyer Flasks

Corning baffled and plain Erlenmeyer and Fernbach culture flasks are ideal for shaker culture applications and storage. Like all Corning flasks, the Erlenmeyer flasks are certified nonpyrogenic and sterile.

- Polycarbonate construction: USP Class VI material provides excellent optical clarity and mechanical strength
- Sizes range from 125 mL to 3L
- Baffled or plain bottom options in every size
- Molded-in graduations for accuracy
- Vent cap option for continuous gas exchange while ensuring sterility and preventing leakage
- Individually packaged and radiation sterilized for ease of use
- All flasks have the highest Sterility Assurance Level (SAL) of 10^{-6}
- Certified nonpyrogenic

Corning Polycarbonate Erlenmeyer Flasks and Caps Ordering Information

Baffled Bottom Erlenmeyer Flasks

Cat. No.	Description	Sterile	Qty/Cs
431405	Erlenmeyer Flask, Baffled, 125 mL, Vent Cap	Yes	50
431404	Erlenmeyer Flask, Baffled, 125 mL, Plug Seal Cap	Yes	50
431407	Erlenmeyer Flask, Baffled, 250 mL, Vent Cap	Yes	50
431406	Erlenmeyer Flask, Baffled, 250 mL, Plug Seal Cap	Yes	50
431401	Erlenmeyer Flask, Baffled, 500 mL, Vent Cap	Yes	25
431408	Erlenmeyer Flask, Baffled, 500 mL, Plug Seal Cap	Yes	25
431403	Erlenmeyer Flask, Baffled, 1L, Vent Cap	Yes	25
431402	Erlenmeyer Flask, Baffled, 1L, Plug Seal Cap	Yes	25
431256	Erlenmeyer Flask, Baffled, 2L, Vent Cap	Yes	6
431253	Fernbach Culture Flask, Baffled, 3L, Vent Cap	Yes	4

Plain Bottom Erlenmeyer Flasks

Cat. No.	Description	Sterile	Qty/Cs
431143	Erlenmeyer Flask, 125 mL, Vent Cap	Yes	50
430421	Erlenmeyer Flask, 125 mL, Plug Seal Cap	Yes	50
431144	Erlenmeyer Flask, 250 mL, Vent Cap	Yes	50
430183	Erlenmeyer Flask, 250 mL, Plug Seal Cap	Yes	50
431145	Erlenmeyer Flask, 500 mL, Vent Cap	Yes	25
430422	Erlenmeyer Flask, 500 mL, Plug Seal Cap	Yes	25
431147	Erlenmeyer Flask, 1L, Vent Cap	Yes	25
431146	Erlenmeyer Flask, 1L, Plug Seal Cap	Yes	25
431255	Erlenmeyer Flask, 2L,Vent Cap	Yes	6
431252	Fernbach Culture Flask, 3L, Vent Cap	Yes	4

431363 Flat Cap

431340 Vent Cap

Replacement Erlenmeyer Flask Caps

Corning® Polypropylene Erlenmeyer Flask Caps are also available separately. They are sterile, individually packaged and available for the 500 mL and 1L*, 2L and 3L flask sizes.

Cat. No.	Description	Sterile	Qty/Cs
431372*	43 mm Vent Cap, 500 mL and 1L Erlenmeyer Flask*	Yes	50
431339	48 mm Vent Cap, 2L Erlenmeyer Flask	Yes	24
431364	48 mm Flat Cap, 2L Erlenmeyer Flask	Yes	24
431340	70 mm Vent Cap, 3L Erlenmeyer Flask	Yes	24
431363	70 mm Flat Cap, 3L Erlenmeyer Flask	Yes	24

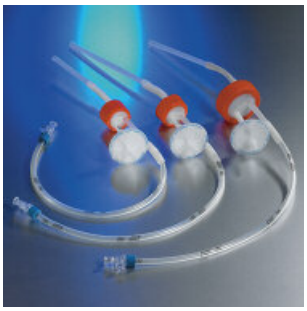
*The 43 mm cap for the 500 mL and 1L sizes are available Made to Order only with a 5 case minimum.

Aseptic Transfer Caps

Corning Erlenmeyer Flask Aseptic Transfer Caps are available separately. They are sterile and arrive individually doubled bagged. They are available for the 1L, 2L and 3L flask sizes. The transfer caps have two ports. One port ends in a 0.2 µm Acro 50 mm disk and the other port is C-Flex Tubing ending in either a male luer lock or a male polycarbonate quick connect. The Diptube reaches all the way to the bottom of the flask for easy aseptic transfer of your liquid handling processes.

Cat. No.	Description	Sterile	Qty/Cs
431444	43 mm Cap, 1L, Diptube with 0.2 µm Vent, MLL	Yes	5
431445	43 mm Cap, 1L, Diptube with 0.2 µm Vent, MPC	Yes	5
431446	48 mm Cap, 2L, Diptube with 0.2 µm Vent, MLL	Yes	6
431447	48 mm Cap, 2L, Diptube with 0.2 µm Vent, MPC	Yes	6
431448	70 mm Cap, 3L, Diptube with 0.2 µm Vent, MLL	Yes	4
431449	70 mm Cap, 3L, Diptube with 0.2 µm Vent, MPC	Yes	4

Aseptic Transfer Caps, MLL



Aseptic Transfer Caps, MPC

Cell Scrapers and Lifters

3008 Cell Lifter

3010 Small Cell Scraper

Cell Scrapers and Cell Lifters

- Useful for the manual harvesting of cells
- Blade design minimizes cell damage and ensures even contact with the growth surface
- Cell lifter is useful for harvesting cells (especially stem cells) in dishes
- Scrapers designed for use in flasks
- Individually wrapped
- Sterilized by gamma radiation
- Certified nonpyrogenic

Cell Scraper and Lifter Ordering Information

Cat. No.	Description	Blade Length (cm)	Handle Length (cm)	Qty/Pk	Qty/Cs
3008	Cell lifter	1.9	18	1	100
3010	Small scraper	1.8	25	1	100
3011	Large scraper	3.0	39	1	100

Technical Appendix

CORNING® CELL CULTURE SURFACES

Introduction

For over eighty years Corning has been developing products and surfaces for cell culture. Corning currently offers six polystyrene-based surfaces (Table 1) for growing cells including the most recent technology revolution, the patented Corning CellBIND® surface (U.S. Patent 6,617,152):

Most of these early plastic vessels were made from polystyrene, a long carbon chain polymer with benzene rings attached to every other carbon. Polystyrene was chosen because it has excellent optical clarity, is easy to mold and is relatively inexpensive. However, it also has one significant drawback: it is a very hydrophobic (nonwettable) polymer to which cells have difficulty attaching. Fortunately, the surface of polystyrene can be easily modified by a variety of chemical (sulfuric acid) and physical (corona discharge, gas-plasma or irradiation) methods. Using these methods, hydroxyl, ketone, aldehyde, carboxyl and amine groups can readily be grafted onto the polymer (Figure 1). These groups modify the surface characteristics changing the uncharged hydrophobic surface into a more ionic hydrophilic surface. Polystyrene can also be modified through chemical reactions to allow the covalent attachment of a variety of reactive groups that can be used for the subsequent covalent immobilization of biomolecules. For additional information, please check the References.

Corning CellBIND® Surface

The Corning CellBIND culture surface, the first novel cell culture surface treatment in over 20 years, is designed to improve cell attachment under difficult conditions, such as reduced-serum or serum-free medium, resulting in higher cell yields. It is also useful for growing "difficult" cells such as primary cultures or transfected cells over expressing proteins. Developed by Corning scientists, this patented technology (U.S. Patent 6,617,152) uses a novel microwave plasma process for treating the culture surface. This process improves cell attachment by incorporating significantly more oxygen into the cell culture surface than traditional plasma or corona discharge treatments, rendering it more hydrophilic (wettable) and increasing the stability of the surface.

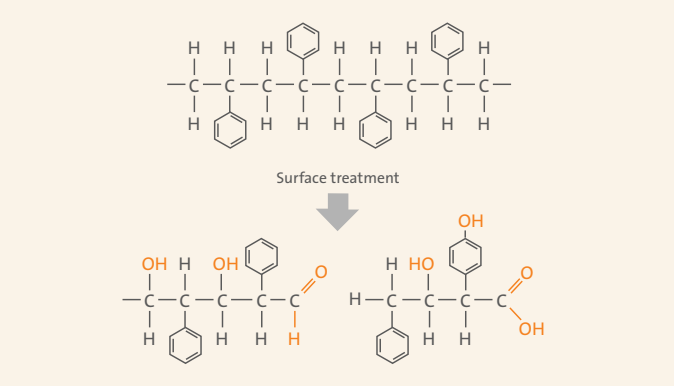


Figure 1. Polystyrene can be surface modified by the addition of a variety of different chemical groups, by breaking the carbon chain backbone, or by opening the benzene ring (not shown).

Unlike biological coatings, the Corning CellBIND surface is a nonbiological surface that requires no special handling or storage. Because the polymer is treated, rather than coated, the surface is more consistent and stable. This enhanced cell performance has already led to a major biotechnology company choosing Corning roller bottles with the Corning CellBIND surface for producing a new FDA approved protein therapeutic.

Corning CellBIND surface benefits:

- Quickly adapts cells to reduced serum or serum-free conditions
- May eliminate the need for tedious, time-consuming, expensive and low stability biological coatings
- Stable at room temperature, requires no refrigeration or special handling
- Gives more consistent and even cell attachment for difficult to attach cell lines, especially transfected cells
- Reduces premature cell detachment from confluent cultures especially in roller bottles and during cell-based assays

The Corning CellBIND surface is available on flasks, multiple well plates, CellSTACK® Culture Chambers, roller bottles, 96 well plates, 384 well plates, and dishes.

Table 1. Corning Cell Culture Surfaces

Corning Surface	Binding Interaction	Sample Properties
Corning CellBIND Surface modified polystyrene surface	Hydrophilic and ionic (negatively charged)	Improves cell attachment and binding to polystyrene
Standard Tissue culture treated polystyrene	Hydrophilic and ionic (negatively charged)	Allows cell attachment and binding to polystyrene
Untreated polystyrene	Hydrophobic	Significantly reduces the attachment of most cells
Ultra Low Attachment coated polystyrene	Hydrophilic and nonionic	Hydrogel layer prevents the attachment of almost all cells
Poly-D-lysine coated polystyrene	Hydrophilic and ionic (positively charged)	Improves cell attachment and binding to polystyrene
Ultra-Web™ Synthetic Surface	Hydrophilic and ionic interactions (positively charged) on a 3D surface	Promotes more *in vivo*-like morphology

Ultra-Web™ Synthetic Surfaces

Ultra-Web Synthetic Surfaces are composed of randomly orientated electrospun polyamide nanofibers with an average fiber diameter of ~180 nm. This creates a culturing substrate that mimics structural components within the basement membrane or extracellular matrix.

Ultra-Web synthetic surface is available with two surface chemistries:

- Untreated electrospun polyamide nanofibers with an uncharged slightly hydrophilic surface
- Polyamine treated electrospun polyamide nanofibers with a positively charged surface for enhanced cell attachment or binding and covalently linking biomolecules

Ultra-Web Synthetic Surface Applications:

- Ideal for culturing liver, neuronal, kidney and stem cell lines or primary cultures where current surfaces do not provide the necessary culture performance or function
- Replacement for poly-lysine or animal-derived biological coatings
- Ideal substrate for binding cell attachment and growth factors to create more *in vivo*-like culture environments
- Compatible with cell-based luminescence-reporter gene and FLIPR calcium flux assays
- Promotes more *in vivo*-like morphology (spheroid and dome formation)

Ultra-Web Synthetic Surface Benefits:

- Synthetic surfaces are more stable and consistent lot to lot than biological coatings
- Cells grow on the nanofiber surface, not in it, for easy harvesting
- Easy to view cells using phase contrast microscopy
- Ready to use and room temperature stable

Ultra-Low Attachment Coated Polystyrene Surface

The Corning Ultra-Low Attachment surface is a covalently bound hydrogel layer that is hydrophilic and neutrally charged. Since proteins and other biomolecules passively adsorb to polystyrene surfaces through either hydrophobic or ionic interactions, this hydrogel surface naturally inhibits nonspecific immobilization via these forces, thus inhibiting subsequent cell attachment. This surface is very stable, noncytotoxic, biologically inert and nondegradable. Corning offers the Ultra-Low Attachment surfaces on dishes, plates, flasks, and CellSTACK® Culture Chamber 1-Stack.

This Ultra-Low Attachment surface has been shown to successfully inhibit attachment of anchorage dependent MDCK, VERO, and C6 cells grown for a period of time equal to that necessary to obtain confluent cell growth on the control surface (standard tissue culture treated polystyrene; Figure 2). This surface has also been shown to inhibit the attachment and activation of macrophages and neutrophils.

Ultra-Low Attachment culture vessels are useful for:

- Studying tissue-specific functions of certain cancer cells (i.e., MCF-7 breast cancer cells)

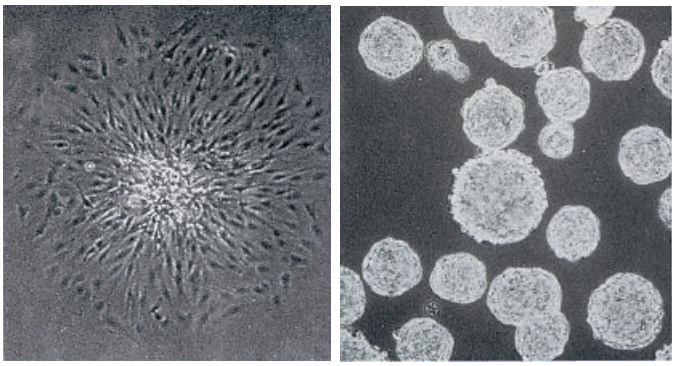


Figure 2. Single cell derived colonies of C6 glioma cells grow as flattened attached colonies in standard tissue culture treated surface (left panel) but form unattached spherical colonies on the ultra low attachment surface (right panel).

- Preventing stem cells from attachment-mediated differentiation
- Selectively culturing tumor or virally transformed cells as unattached colonies (substitute for soft agar assays)

Poly-D-lysine Coated Surface

Some assays and procedures require enhanced binding of cells to polystyrene. Corning poly-D-lysine (PDL) microplates are coated with PDL (molecular weight range of 70 to 150 kDa) by a proprietary method. This synthetic polymeric coating creates a uniform net positive charge on the plastic surface which, for some cell types, can enhance cell attachment, growth and differentiation, especially in serum-free and low serum conditions. PDL surfaces often improve attachment and growth of primary neurons, glial cells, neuroblastomas, and a variety of transfected cell lines, including HEK-293. Corning offers poly-D-lysine coated 96 and 384 well microplates.

Standard Tissue Culture Treated Polystyrene Surface

Standard Corning® polystyrene cell culture vessels are surface modified using either corona discharge (flasks, dishes and microplates) or gas-plasma (roller bottles and culture tubes). These processes generate highly energetic oxygen ions which graft onto the surface polystyrene chains (Figure 1) so that the surface becomes hydrophilic and negatively charged when placed in medium. Corning offers the standard tissue culture treated surface on flasks, dishes, multiple well plates, CellSTACK® Culture Chambers, roller bottles and culture tubes.

Untreated Polystyrene Surface

Natural, unmodified polystyrene surfaces are hydrophobic and only bind cells and biomolecules through passive hydrophobic interactions. Corning offers untreated polystyrene culture dishes and microplates for growing cells in stationary suspension or other applications where reduced cell attachment is desired. However, these untreated vessels are sterilized by low dose gamma irradiation, which slightly increases the wettability of the surface. Since some transformed cell lines (CHO-k1, for example) and macrophages will attach and grow on these hydrophobic surfaces, Corning also offers an Ultra-Low Attachment Surface (see below) for use in situations where cell attachment must be kept to an absolute minimum.

CHARACTERISTICS OF CORNING® PLASTICWARE

	Polystyrene	Polyethylene (High Density)	Polypropylene	Polycarbonate	Nylon	P.T.F.E. (Teflon®)	Polyethylene Terephthlate (PET)
PHYSICAL CHARACTERISTICS							
Basic Properties	Biologically inert, hard, excellent optical qualities	Biologically inert, high chemical resistance	Biologically inert, high chemical resistance, exceptional toughness	Clear, very tough, inert, high temperature resistance	Tough, heat resistant, machinable, high moisture vapor transmission	Biologically and chemically inert, high resistant slippery surface	Biologically inert, hard, tough, excellent optical qualities
Clarity	Clear	Opaque	Translucent	Clear	Opaque	Opaque	Clear
Autoclave Results	Melts	May	Withstands distort	Withstands several cycles	OK one cycle	OK	Melts
Heat Distortion Point	147-175°F 64-80°C	250°F 121°C	275°F 135°C	280-290°F 138-143°C	300-356°F 150-180°C	250°F 121°C	250°F 70°F
Burning Rate	Slow	Slow	Slow	Self-extinguishing	Self-extinguishing	None	–
EFFECTS OF LABORATORY REAGENTS							
Weak Acids	None	None	None	None	None	None	None
Strong Acids	Oxidizing acids attack	Oxidizing acids attack	Oxidizing acids attack	May be attacked	Attacked	None	Oxidizing acids attack
Weak Alkalies	None	None	None	None	None	None	None
Strong Alkalies	None	None	None	Slowly attacked	None	None	Attacked
Organic Solvents	Soluble in aromatic chlorinated hydrocarbons	Resistant below 80°C	Resistant below 80°C	Soluble in chlorinated hydrocarbons; partly soluble in aromatics	Resistant	Resistant	Soluble in aromatic or chlorinated hydrocarbons
GAS PERMEABILITY OF THIN WALL PRODUCTS*							
O_2	Low	High	High	Very low	Very low	–	Very low
N_2	Very low	Low	Low	Very low	Very low	–	Very low
CO_2	High	Very high	Very high	Low	–	–	Low

Portions of this table courtesy of Modern Plastics Encyclopedia. Most data are from tests by A.S.T.M. methods. Tables show averages or ranges. Many properties vary with manufacturer, formulation, testing laboratory, and the specific operating conditions.

*Obtained from a table which lists gas permeability in CC/100 sq. inches per 24 hrs./mil.

CHEMICAL COMPATIBILITY OF CORNING® PLASTICWARE

	PS	PP	PVC	CA	PC	CN	NY	MCE	PTFE	PET
Acids										
Hydrochloric acid (25%)	G	G	G	N	R	R	N	O	R	R
Hydrochloric acid (concentrated)	F	G	F	N	R	N	N	N	R	O
Nitric acid (concentrated)	P	P	P	N	R	N	N	N	O	N
Nitric acid (25%)	P	G	F	N	R	L	N	O	R	R
Alcohols										
Butanol	G	G	G	R	R	R	R	R	R	R
Ethanol	G	G	G	R	R	N	R	O	R	R
Methanol	G	G	G	R	R	N	R	O	R	R
Amines										
Aniline	G	G	P	N	N	R	R	N	R	O
Dimethylformamide	P	G	F	N	N	N	R	N	R	N
Bases										
Ammonium hydroxide (25%)	F	G	G	R	N	R	R	O	N	O
Ammonium hydroxide (1N)	F	G	G	N	N	R	R	O	N	N
Sodium hydroxide	G	G	G	N	N	N	R	N	R	N
Hydrocarbons										
Hexane	P	G	F	R	R	R	R	R	R	R
Toluene	P	G	P	R	O	R	R	R	R	N
Xylene	P	F	P	R	R	R	R	R	R	N
Dioxane	P	G	P	N	N	N	R	N	R	R
Dimethylsulfoxide (DMSO)	P	G	P	N	N	N	R	N	R	O*
Halogenated Hydrocarbons										
Chloroform	P	N	P	N	N	R	R	N	R	R
Methylene chloride	P	F	P	N	N	R	R	N	R	N
Ketones										
Acetone	P	G	P	N	O	N	R	N	R	R
Methyl ethyl diketone	P	G	P	N	O	N	R	O	R	R

*Can be used with aqueous solutions containing up to 20% DMSO.

R = Recommended, L = Limited Resistance, N = Not Recommended, O = Testing Advised, F = Fair, G = Good, P = Poor, PP = Polypropylene, PVC = Polyvinyl Chloride, CA = Cellulose Acetate, PC = Polycarbonate, PTFE = Polytetrafluoroethylene PS = Polystyrene, CN = Cellulose Nitrate, NY = Nylon, MCE = Mixed Cellulose Esters, PET = Polyethylene Terephthalate.

CHARACTERISTICS OF CORNING CENTRIFUGE TUBES

The following information is provided to serve as a general guideline for determining suitability of Corning centrifuge tubes for your applications. In addition, Corning recommends following the procedures outlined by the centrifuge manufacturer, as well as conducting a trial run to determine proper conditions before beginning any critical applications.

Corning centrifuge tubes are tested for leakage. They should not break or leak if used in a properly balanced rotor with suitable carriers, holders, and adapters that fully support the tubes when run in accordance with the guidelines in this section. These tubes are intended for one-time use only; reuse is not recommended as breakage or leakage may occur.

The recommended working temperature range for Corning centrifuge tubes is 0 to 40°C. The suitability of these tubes for storage below 0°C depends on both the solution and the storage conditions. In general, the polypropylene and PET tubes are more resistant to stress at low temperatures than polystyrene. It is strongly recommended that a trial run be performed under actual conditions to test the suitability of the tubes for frozen storage.

Suggestions for Safe Centrifugation

- ***Caution***: When centrifuging pathogenic organisms, clinical specimens known or suspected of being infectious, or any other potentially biohazardous materials, approved safety containment systems should be used. Contact your centrifuge manufacturer for appropriate accessories or recommendations.
- Read protocols and instruction manuals carefully. Do not confuse speed or revolutions per minute (RPM) with relative centrifugal force (RCF). Instructions for centrifuging a sample at a given RPM and time are incomplete unless the rotor or radius is specified. Protocols should always state the time and RCF value for centrifuging a sample.

- Proper balancing and distribution of the load in a centrifuge is critical for optimum performance and to prevent damage to the tubes or centrifuge. Opposing buckets or loads should always be balanced within the range specified by the manufacturer. Tubes should always be distributed in the buckets with respect to the center of rotation as well as the pivotal axis of the bucket. Failure to do this may prevent the bucket from achieving a horizontal position during the centrifugation run. Uneven separations or tube failure may result.

These centrifuge tubes are intended for use by persons knowledgeable in safe laboratory practices. Failure can result from surface damage, exceeding the specified RCF values, using unsuitable support systems, improper temperatures, or incompatible chemicals.

The RCF ratings for Corning® disposable centrifuge tubes have been established at room temperature using tubes filled to nominal capacity with water and spun in a horizontal rotor centrifuge for 5 minutes. The centrifuge must be equipped with the recommended carriers, adapters, and cushions that fully support the tubes. If an angle head rotor is used or proper support is not provided, RCF values will be lower. Use of liquid other than water may also lower RCF values. Please consult your centrifuge specifications and the nomogram table (page 44) to determine speeds at which maximum RCF is achieved.

Chemical Compatibility of Disposable Plastic Centrifuge Tubes

The mechanical strength, flexibility, color, weight and dimensional stability of all plastic centrifuge tubes are affected to varying degrees by the chemicals with which they come in contact. Specific operating conditions, especially temperature, RCF, rotor type, carrier design, and run length will also affect tube performance.

Physical Properties of Disposable Plastic Centrifuge Tubes

	Clear Polypropylene	New Polyethylene Terephthalate
Recommended Working Temp*	0-40°	0-40°
Heat Distortion Point	121°	70°
Flexibility	Moderate	Rigid
Transparency	Clear	Clear
Maximum RCF:		
15 mL Tube	12,000 x g	3,600 x g
50 mL Tube	15,500 x g	3,600 x g
250 mL Tube	–	–
500 mL Tube	–	–

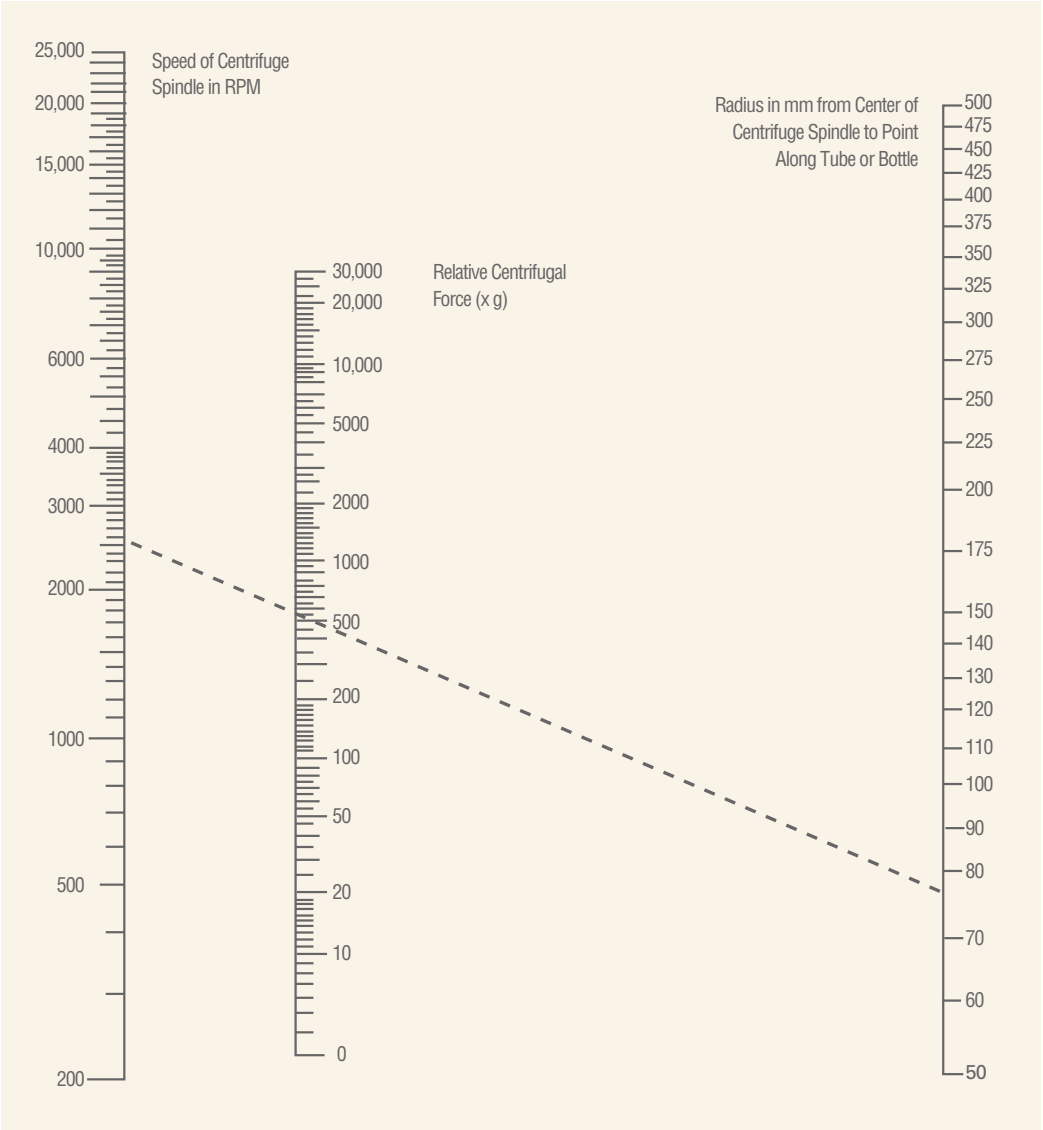
*At room temperature for 24 hours.

Chemical Resistance of Disposable Plastic Centrifuge Tubes*

Chemical Class	Polyethylene Terephthalate	Polypropylene	Polyethylene Caps
Acids (weak)	1	1	1
Acids	3	1	1
Alcohols	1	1	1
Aldehydes	3[a]	2[a]	1
Bases	3	1	1
Esters	2	2	2
Hydrocarbons:			
Aliphatic	1	2	3
Aromatic	3	3[b]	3
Halogenated	3	3	3
Ketones	2	2[c]	2

*At room temperature for 24 hours.
1 = Recommended; 2 = Suitable for most applications. However, a trial run under specific operating conditions is recommended; 3 = Not recommended.
Note: a = Formaldehyde, rated 1; b = Phenol, rated 1; c = Acetone, rated 1.

Nomogram for Computing Relative Centrifugal Force



To calculate the RCF value at any point along the tube or bottle, measure the radius, in mm, from the center of the centrifuge spindle to the particular point. Draw a line from the radius value on the right hand column to the appropriate centrifuge speed on the left-hand column. The RCF value is the point where the line crosses the center column. The nomogram is based on the formula:

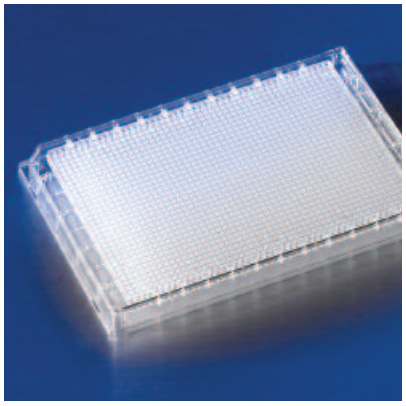
$RCF = (11.17 \times 10^{-7}) RN^2$

where:

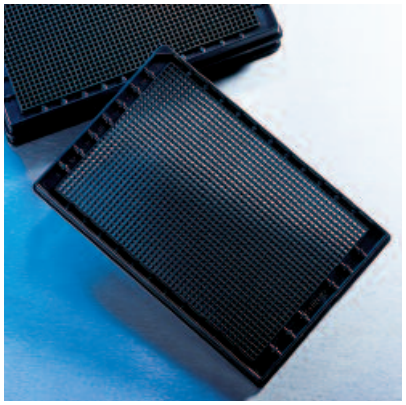
R = Radius in mm from centrifuge spindle to point in tube bottom

N = Speed of spindle in RPM

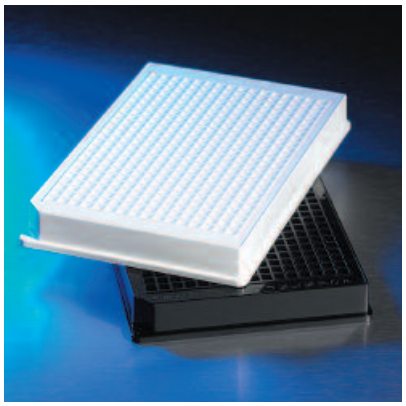
Microplates



1536 Well Echo™ Qualified Microplates, page 62



1536 Well Black Clear Bottom Microplates, page 61



384 Well Low Flange Microplate, page 58

Overview

DESIGNED FOR PERFORMANCE

Corning has been setting the standard for excellence in life science labware for over 85 years. With our comprehensive line of plasticware, including assay products, we continue to be an industry leader. Corning strives for the highest standards in product design and plastics molding.

Corning Life Sciences microplates and accessories are manufactured under strict process controls guaranteeing consistent product performance. Our manufacturing facility is located in Kennebunk, Maine, registered to the ISO 9001 2000 standards. ISO registration is recognized worldwide as a standard of excellence for quality systems.

Customers can request a Certificate of Compliance for any Corning® microplate. Also available are detailed product descriptions and drawings that highlight product dimensions and testing procedures. All are available by contacting your local Corning Life Sciences office. See the back cover of this guide for a listing.

CORNING MICROPLATE EQUIPMENT COMPATIBILITY PROGRAM

The increasing use of automated laboratory equipment demands consumables that have been qualified for fit and function. Corning microplates are designed with automation compatibility in mind and meet industry standards. In addition, Corning has a comprehensive equipment compatibility program in which leading equipment manufacturers certify the compatibility of our microplates with their instruments.

For the most up-to-date information on equipment compatibility, Corning maintains a *Microplate Equipment Compatibility Guide* on our web site at **www.corning.com/lifesciences**. This on-line guide is searchable by instrument type, plate type, and by manufacturer name.

LIFE SCIENCES EARLY ACCESS TO DEVELOPMENT – CORNING'S L.E.A.D. PROGRAM

Corning is committed to meeting the rapidly evolving needs of the life sciences laboratory. We are continually developing new and innovative products that are compatible with the latest advances in technology and instrumentation. Our L.E.A.D. program gives researchers access to these products and special pricing prior to their full market release. Contact your local Corning Life Sciences office or representative for more information about the products currently available through this program.

SELECTING THE BEST CORNING® MICROPLATE FOR YOUR APPLICATION

Corning offers a range of microplates in a variety of well designs and sizes, polymer materials and colors, and surface treatments. This guide includes 96, 384, and 1536 well microplates. Information on Corning plates in lower density formats (e.g., 24 and 48 well plates) can be found in our on-line product catalog at **www.corning.com/lifesciences**.

There are three simple steps for selecting the best Corning microplate for your application:

1. Choose the Corning microplate format and well design
2. Choose the Corning microplate material and color
3. Choose the Corning surface treatment

1 Choose the Corning Microplate Format and Well Design

Corning microplate dimensions meet industry standards, ensuring compatibility with all microplate equipment and automation. Our microplates feature an A-1 corner notch design. The A-1 corner notch allows for quick visual orientation of plates when setting up automation runs, thereby reducing chances for robotics problems and lost productivity.

Corning microplates are available in several well shapes, optimized to meet different application requirements.

- **Flat bottom** – for bottom reading plate readers and cell culture applications
- **Round bottom** – for improved mixing and washing
- **V-bottom** – for easier removal of total well contents
- **Easy Wash™ bottom** (round to narrowed flat well bottom) – for improved washing in immunoassays

In addition, Corning offers Half Area microplates for the 96 well format and Low Volume microplates for the 384 well format. These microplates are ideal for assays using reduced working volumes and can provide savings in reagent and compound use.

Well Shape Selection Chart

	Microplate Format						
Well Shape	96 Well	96 Well Stripwell™	Half Area 96 Well	384 Well	Low Volume 384 Well	1536 Well	2 µL 1536 Well
Flat bottom	■	■	■	■	■	■	
Round bottom	■				■	■	■
V-bottom	■						
Easy Wash bottom	■						

Detailed information about well volume, working volumes, and plate dimensions for Corning 96, 384, and 1536 well microplates are provided throughout this guide.

2 Choose the Corning Microplate Material and Color

Corning uses different polymers for microplates to support various application requirements. Selection of the appropriate polymer material and color can improve assay performance. Additional technical information on key polymers can be found in the appendix at the end of this guide.

Material Selection Chart

	Microplate Format						
Plate Material	96 Well	96 Well Stripwell	Half Area 96 Well	384 Well	Low Volume 384 Well	1536 Well	2 µL 1536 Well
Clear polystyrene	■	■	■	■			■
Solid black or white polystyrene	■	■	■	■	■	■	■
Clear bottom black or white polystyrene	■		■	■	■	■	
Polypropylene	■			■			
Solid black or white polypropylene	■			■*			
Flexible vinyl (PVC)	■						
UV	■		■	■			

*Only available in black polypropylene

Corning® microplates are available in different materials:

- **Clear polystyrene microplates** are used for cell culture and colorimetric (absorbance) assays.
- **Black and white polystyrene microplates** can be used for fluorescent and luminescent assays. Solid black polystyrene plates are designed to reduce well-to-well crosstalk and background for fluorescent assays. Solid white polystyrene plates are designed to reduce well-to-well crosstalk, enhance luminescent signals and reduce background for luminescent assays. Both black and white plates are available with clear bottoms for use in cell-based assays and microscopy applications, and allow top or bottom reading capabilities.
- **Polypropylene microplates** are ideal for compound storage or assays that require high resistance to solvents including DMSO and ethanol. The Corning ClearPro™ 96 well microplate is also available and has greater clarity than standard polypropylene for easier visual inspection of samples.
- **Black and white polypropylene microplates** can be used for fluorescent and luminescent assays and reduce nonspecific binding problems observed with polystyrene plates. The polypropylene material is also highly resistant to many commonly used solvents.
- **Flexible vinyl (PVC) microplates** are economical, nonsterile general assay 96 well plates. Due to their flexible nature, these microplates are not compatible with automation.
- **UV microplates** allow UV absorbance readings with low background especially at 260 to 280 nm, and are ideal for determining protein or nucleic acid concentration.

3 Choose the Corning Surface Treatment

Corning offers polystyrene microplates with a variety of modified surfaces. These surfaces can support binding or covalent immobilization of cells, proteins, nucleic acids, and other biomolecules. Additional information on these surfaces can be found in the Technical Appendix at the end of this guide.

Surface Treatment Selection Chart

	Microplate Format						
Surface Treatment	96 Well	96 Well Stripwell™	Half Area 96 Well	384 Well	Low Volume 384 Well	1536 Well	2 µL 1536 Well
For General Assay							
Not Treated (medium binding)	■	■	■	■	■	■	■
High Binding	■	■	■	■	■		■
Nonbinding (NBS™)	■		■	■	■	■	
Sulfhydryl (Sulfhydryl-BIND™) Binding	■	■					
Carbohydrate (Carbo-BIND™) Binding	■	■					
Photo-reactive (Universal-BIND™) Binding	■	■					
Amine Binding		■					
For Cell Culture							
Tissue Culture (TC) Treated	■	■	■	■	■	■	■
Ultra-Low Attachment	■						
Corning® CellBIND® Surface	■			■			
Poly-D-Lysine	■			■	■		

Corning offers various surface treatments for microplates:

- **Not treated (or medium binding) polystyrene surface** is hydrophobic in nature and binds biomolecules through passive interactions. It is suitable primarily for the immobilization of large molecules, such as antibodies, that have large hydrophobic regions that can interact with the surface.
- **High binding surface** is capable of binding medium (>10 kD) and large biomolecules that possess ionic groups and/or hydrophobic regions.
- **Nonbinding surface (NBS)** is a Corning proprietary treatment technology used on polystyrene microplates to create a nonionic hydrophilic surface (polyethylene oxide-like) that minimizes molecular interactions. Ideal for reducing protein and nucleic acid binding at low concentrations, and increasing assay signal to noise.

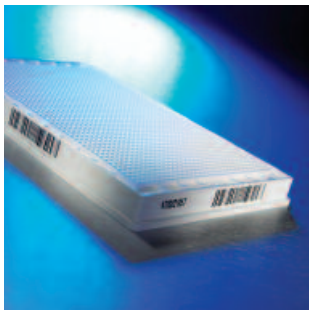
- **Corning® CellBIND® Surface** is a Corning proprietary treatment which provides improved consistency and even cell attachment.
- **Tissue culture treated (TC-Treated) surface** is used for the attachment and growth of anchorage-dependent cells.
- **Ultra-Low Attachment surface** has a covalently bonded hydrogel designed to minimize cell attachment, protein absorption, enzyme activation and cellular activation. This surface is noncytotoxic, biologically inert and nondegradable.
- **Poly-D-lysine coated surface** can improve attachment of difficult-to-attach cells.
- **Sulfhydryl (Sulfhydryl-BIND™) binding surface** has covalently-linked maleimide groups that covalently couple to sulfhydryl groups via SH moieties. Ideal for assays requiring site-directed orientation of a biomolecule, especially antibodies.
- **Carbohydrate (Carbo-BIND™) binding surface** has hydrazide groups covalently coupled to carbohydrate groups. Ideal for assays requiring site-directed orientation of a biomolecule (oxidized antibodies, carbohydrates, and glycosylated proteins) while maintaining enzymatic or immunological activity.
- **Photo-reactive (Universal-BIND™) surface** covalently immobilizes biomolecules via abstractable hydrogens using UV illumination, resulting in a carbon-carbon bond. Although linkage is nonspecific and does not allow for site-directed orientation of a biomolecule, this surface may be useful for immobilization of double stranded DNA, antigens of unknown structure, and mixtures of biomolecules (e.g., cell lysates).
- **Amine surface** has positively charged amine groups (2 x 10^{13} reactive sites/cm^2) that can be used for covalent immobilization via bifunctional crosslinkers.

BAR CODE CUSTOMIZATION

New

Generic Bar Codes

Corning now offers a line of generic bar coded plates to better meet the demands of your screening needs (see list of available plates on back)



Generic Bar Code Microplate

- No lead time: Plates are in stock and ready to ship
- Surface identification: The surface treatment of the microplate is identified in the human readable portion of the bar code:
  - NT = Non Treated
  - TC = Tissue Culture Treated
  - NB = Non Binding Surface
- Labels applied to all 4 sides of the microplate to ensure usability regardless of scanner location
- Each microplate is specially treated to reduce the impact of static build-up
- Code 128 bar code format ensures compatibility with most bar code scanning and software systems

Custom Designed Bar Codes

Corning will assist in designing and implementing a bar code label to meet your exact specifications. We can provide bar code label test samples at the front end of a project, to confirm decodability and ensure flawless performance in your end-use process. Our other customization features include:

- Superior print quality and resolution
- Flexible bar code label positioning
- Resistant to most commonly used organic solvents

Dependable Durability

Bar codes have been quality tested for optimal readability, chemical resistance, and temperature variation.

Expert Advice

Most Corning® microplates are suitable for bar code customization. Contact Corning Life Sciences or your local representative for more information.

96 Well Microplates

Corning offers a complete line of 96 well microplates for laboratory miniaturization and automation. These microplates are available for different applications:

- 96 well assay microplates
  - General assays – Not treated, NBS™, covalent binding, high binding, flexible vinyl (PVC), and UV microplates
  - Cell-based assays – Tissue culture treated, Corning® CellBIND® Surface, poly-D-lysine, and Ultra-Low Attachment polystyrene microplates
  - Immunoassays – EIA/RIA polystyrene plates (medium and high binding)
- 96 well polystyrene Stripwell™ microplates
- 96 well polypropylene storage microplates and cluster tubes

This selection guide does not include 96 well microplates for PCR and genomics. Please refer to the Corning Genomics Selection Guide for information on these products (page 73).

For additional microplate information, refer to *Selecting the Best Corning Microplate for Your Application* in the Overview section of this guide (page 47).

96 WELL ASSAY MICROPLATES

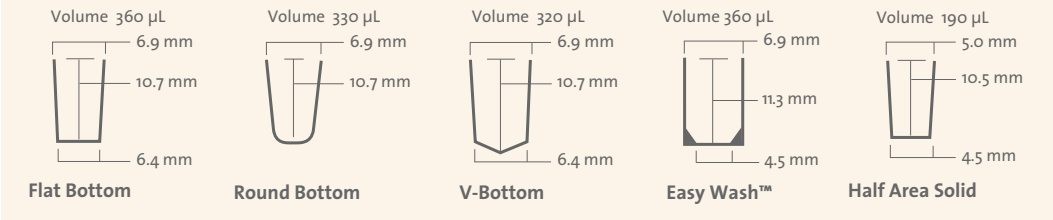
Corning offers a wide variety of assay microplates. They are organized into five groups:

- 96 Well Clear Polystyrene Microplates
- 96 Well Solid Black and White Polystyrene Microplates
- 96 Well Clear Bottom Black and White Polystyrene Microplates
- 96 Well UV Microplates
- 96 Well Clear Flexible Vinyl (PVC) Microplates

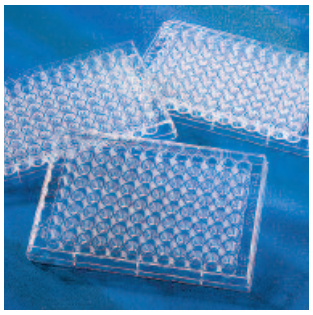
Corning 96 well polystyrene plates are offered in standard volume formats and in lower volume format (called Corning half area plates). Corning 96 well polystyrene microplates have plate dimensions (length x width x height) of 127.76 x 85.48 x 14.22 mm that meet proposed industry standards.

96 Well Plate Types	Well Bottom Shape	Total Well Volume (µL)	Recommended Working Volume (µL)
Standard 96 Well	Flat	360	75 to 200
Standard 96 Well	Round	330	75 to 200
Standard 96 Well	V	320	75 to 200
Standard 96 Well	Easy Wash™	360	75 to 200
Half area 96 Well, Solid	Flat	190	25 to 125
Half area 96 Well, Clear Bottom	Flat	205	25 to 125

96 Well Geometry and Dimensions



Corning® tissue culture treated microplates have the same surface treatment used on other Corning culture vessels. In addition to this traditional surface, Corning offers three additional surfaces: Corning® CellBIND® surface treatment for improving consistency and even cell attachment, a poly-D-lysine coating for enhancing attachment of difficult-to-attach cell lines, and an Ultra-Low Attachment surface for minimizing cell attachment.



96 Well Clear Microplates

96 Well EIA/RIA Microplates

Corning® CellBIND® Surface for Optimizing Cell-Based Assay Performance

- Available in 96 and 384 well black clear bottom microplates and 96 well clear solid microplates
- Surface treatment improves consistency and more even cell attachment, and may improve attachment of difficult-to-attach cell lines
- Not a coating, requires no special handling, and is stable at room temperature
- Sterilized by gamma radiation and certified nonpyrogenic

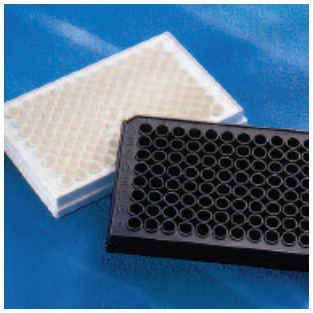
96 Well Clear Polystyrene Microplates

- Cell culture plates are sterilized by gamma radiation and certified nonpyrogenic
- Lids available where indicated (Information on lids and other microplate accessories can be found beginning on page 65.)

96 Well Clear Polystyrene Microplate Ordering Information

Cat. No.	Plate Format	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3360	Standard Plate, no Lid	Round	TC-Treated	Yes	25	100
3366	Standard Plate	Round	High Bind	No	25	100
3367	Standard Plate	Round	Not Treated	Yes	1	50
3788	Standard Plate, with Lid	Round	Not Treated	Yes	20	100
3795	Standard Plate	Round	Not Treated	Yes	25	100
3798	Standard Plate	Round	Not Treated*	No	25	100
3797	Standard Plate	Round	Not Treated	No	25	100
3799	Standard Plate, with Lid	Round	TC-Treated	Yes	1	50
3894	Standard Plate, with Lid	V	TC-Treated	Yes	1	50
3896	Standard Plate	V	Not Treated	Yes	1	48
3897	Standard Plate	V	Not Treated	No	25	100
3898	Standard Plate	V	Not Treated*	No	25	100
2503	Standard Plate	Flat	Universal-BIND™	No	1	50
2507	Standard Plate	Flat	Carbo-BIND™	No	1	50
2509	Standard Plate	Flat	Sulfhydryl-BIND™	No	1	50
New 3300	Standard Plate, with Lid	Flat	Corning® CellBIND® Surface	Yes	5	50
3361	Standard Plate, with Lid	Flat	High Bind	Yes	20	100
3370	Standard Plate, with Lid	Flat	Not Treated	Yes	20	100
3474	Standard Plate, with Lid	Flat	Ultra-Low Attachment	Yes	1	24
3585	Standard Plate, with Lid**	Flat	TC-Treated	Yes	5	50
3590	Standard Plate	Flat	High Bind	No	1	100
3591	Standard Plate	Flat	Not Treated	No	1	50
3595	Standard Plate, with Lid**	Flat	TC-Treated	Yes	1	50
3596	Standard Plate, with Lid	Flat	TC-Treated	Yes	1	50
3598	Standard Plate, with Lid	Flat	TC-Treated	Yes	5	100
3599	Standard Plate, with Lid	Flat	TC-Treated	Yes	1	100
3628	Standard Plate, with Lid	Flat	TC-Treated	Yes	20	100
3641	Standard Plate	Flat	NBS™	No	25	100
3665	Standard Plate, with Lid	Flat	Poly-D-Lysine	Yes***	20	100
3997	Standard Plate, with Lid	Flat	TC-Treated	Yes	10	50
9017	Standard Plate	Flat	Not Treated	No	25	100
9018	Standard Plate	Flat	High Bind	No	25	100
3690	Half Area Plate	Flat	High Bind	No	25	100
3695	Half Area Plate	Flat	Not Treated	No	25	100
3696	Half Area Plate, with Lid	Flat	TC-Treated	Yes	1	50
3697	Half Area Plate, with Lid	Flat	TC-Treated	Yes	20	100
3368	Standard Plate	Easy Wash™	Not Treated	No	25	100
3369	Standard Plate	Easy Wash	High Bind	No	25	100

*Processed to improve hydrophilicity for hemagglutination and similar assays.
**Special low evaporation lid
***Aseptically manufactured



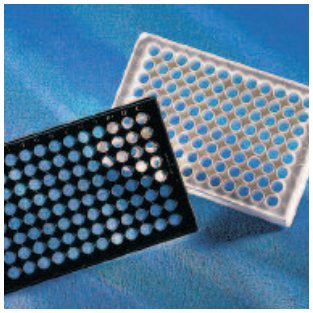
96 Well Black and White Polystyrene Microplates

96 Well Solid Black and White Polystyrene Microplates

- Designed to reduce well-to-well crosstalk
- White plates enhance luminescent signals and have low background luminescence and fluorescence
- Black plates have low background fluorescence and minimize light scattering

96 Well Solid Black and White Polystyrene Microplate Ordering Information

Cat. No.	Plate Format	Plate Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3605	Standard Plate	White	Round	NBS	No	25	100
3789	Standard Plate	White	Round	Not Treated	No	25	100
3792	Standard Plate	Black	Round	Not Treated	No	25	100
3362	Standard Plate, no Lid	White	Flat	TC-Treated	Yes	25	100
3600	Standard Plate	White	Flat	NBS™	No	25	100
3650	Standard Plate	Black	Flat	NBS	No	25	100
3912	Standard Plate	White	Flat	Not Treated	No	25	100
3915	Standard Plate	Black	Flat	Not Treated	No	25	100
3916	Standard Plate, with Lid	Black	Flat	TC-Treated	Yes	20	100
3917	Standard Plate, with Lid	White	Flat	TC-Treated	Yes	20	100
3922	Standard Plate	White	Flat	High Bind	No	25	100
3925	Standard Plate	Black	Flat	High Bind	No	25	100
3990	Standard Plate	White	Flat	NBS	No	5	25
3991	Standard Plate	Black	Flat	NBS	No	5	25
3642	Half Area Plate	White	Flat	NBS	No	25	100
3686	Half Area Plate	Black	Flat	NBS	No	25	100
3688	Half Area Plate, with Lid	White	Flat	TC-Treated	Yes	20	100
3693	Half Area Plate	White	Flat	Not Treated	No	25	100
3694	Half Area Plate	Black	Flat	Not Treated	No	25	100
3875	Half Area Plate, with Lid	Black	Flat	TC-Treated	Yes	20	100
3992	Half Area Plate	White	Flat	NBS	No	5	25
3993	Half Area Plate	Black	Flat	NBS	No	5	25



96 Well Clear Bottom Black and White Microplates

96 Well Clear Bottom Black and White Polystyrene Microplates

- Bottoms are 60% thinner than conventional polystyrene plates, resulting in lower background fluorescence and enabling readings down to 340 nm
- Opaque walls prevent well-to-well crosstalk
- Optically clear flat bottom permits direct microscopic viewing

96 Well Clear Bottom Black and White Polystyrene Microplate Ordering Information

Cat. No.	Plate Format	Plate Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
New 3340	Standard Plate, with Lid	Black	Flat	Corning® CellBIND® Surface	Yes	5	50
3372	Standard Plate, with Lid	Black	Flat	Poly-D-Lysine	Yes	10	50
3601	Standard Plate	Black	Flat	High Bind	No	25	100
3603	Standard Plate, with Lid	Black	Flat	TC-Treated	Yes	1	48
3604	Standard Plate	White	Flat	NBS	No	25	100
3610	Standard Plate, with Lid	White	Flat	TC-Treated	Yes	1	48
3614	Special Optics Plate, no Lid	Black	Flat	TC-Treated	Yes	25	100
3615	Special Optics Plate, with Lid	Black	Flat	Not Treated	No	25	100
3631	Standard Plate	Black	Flat	Not Treated	No	25	100
3632	Standard Plate	White	Flat	Not Treated	No	25	100
3651	Standard Plate	Black	Flat	NBS™	No	25	100
3666	Standard Plate, with Lid	White	Flat	Poly-D-Lysine	Yes*	20	100
3667	Standard Plate, with Lid	Black	Flat	Poly-D-Lysine	Yes*	20	100

96 Well Clear Bottom Black and White Polystyrene Microplate Ordering Information (Continued)

Cat. No.	Plate Format	Plate Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3903	Standard Plate, with Lid	White	Flat	TC-Treated	Yes	20	100
3904	Standard Plate, with Lid	Black	Flat	TC-Treated	Yes	20	100
3995	Standard Plate	White	Flat	NBS™	No	5	25
3998	Standard Plate, with Lid	Black	Flat	Poly-D-Lysine	Yes	5	25
3682	Half Area Plate, with Lid	Black	Flat	Poly-D-Lysine	Yes	10	50
3721	Half Area Plate	Black	Flat	TC-Treated	Yes	5	25
3880	Half Area Plate	Black	Flat	Not Treated	No	25	100
3881	Half Area Plate	Black	Flat	NBS	No	25	100
3882	Half Area Plate, with Lid	Black	Flat	TC-Treated	Yes	20	100
3883	Half Area Plate	White	Flat	Not Treated	No	25	100
3884	Half Area Plate	White	Flat	NBS	No	25	100
3885	Half Area Plate, with Lid	White	Flat	TC-Treated	Yes	20	100
3886	Half Area Plate, no Lid	White	Flat	TC-Treated	Yes	25	100
3887	Half Area Plate, no Lid	Black	Flat	TC-Treated	Yes	25	100
3994	Half Area Plate	White	Flat	NBS	No	5	25

*Aseptically manufactured

Tip for Improving Optical Performance in Fluorescent Assays

Corning® Special Optics 96 Well Microplates have black walls with ultra thin, clear bottoms for sharp, clear images and minimal background in fluorescent assays.

96 Well UV Microplate – Certified DNase- and RNase-free

96 Well UV Microplates

The Corning® 96 well UV microplate has a UV-transparent well bottom and is ideal for determining protein and/or nucleic acid concentrations.

- Certified DNase- and RNase-free
- UV-transparent bottom is molded directly to an acrylic base for greater strength and maximum leak resistance
- Total well volume: flat bottom – 360 µL; recommended working volume of 75 to 200 µL
- UV half area microplate has well volume of 205 µL; working volume of 25 to 125 µL
- Allows UV absorbance readings with low background, especially at 260 to 280 nm
- Lids are available separately. (Information on lids and other microplate accessories can be found beginning on page 65.)

96 Well UV Microplate Ordering Information

Cat. No.	Plate Format	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3635	Standard Plate	Flat	No	25	50
3679	Half Area Plate	Flat	No	25	50

Tip for Reducing Reagent Use

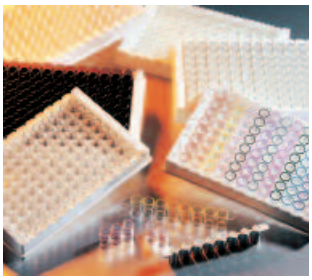
Corning 96 Well Half Area Microplates can save on valuable reagents by reducing the amount of reagent needed per well, while still retaining the ability to be read in standard plate readers. These microplates have a recommended working volume of 25 µL to 125 µL and are available untreated or with tissue culture, high bind, or NBS treatment.

96 Well Clear Flexible Vinyl (PVC) Microplates

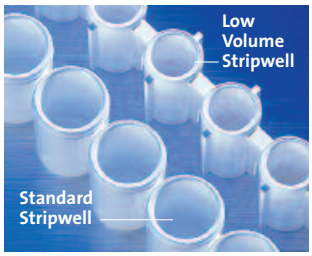
- Untreated PVC microplates are economical plates for solution-based assays, serial dilutions, and general storage applications.
- Well volume of 250 µL (260 µL for V-bottom); working well volume of 50 to 150 µL
- Lids are not available.

96 Well Clear Flexible PVC Microplate Ordering Information

Cat. No.	Plate Format	Well Bottom	Sterile	Qty/Pk	Qty/Cs
2797	Standard Plate	Round	No	25	100
2897	Standard Plate	V	No	25	100
2595	Standard Plate	Flat	No	25	100



Stripwell Microplates



Standard vs. Low Volume

Stripwell Low Volume Microplates

Big Cost Savings!

- Save 70% or more on antibody costs
- Save 50% or more on reagent costs

Features

- Total well volume: 190 µL
- Recommended working volume: 75 to 125 µL
- Same height/path length as a standard strip
- Standard 96 well center-to-center spacing

Custom Stripwell Microplate Colors

white, dark blue, light green, light blue, teal, dark green, yellow, purple, red, orange, pink, black, brown, grey

96 WELL POLYSTYRENE STRIPWELL® MICROPLATES

Corning® Stripwell plates are designed for *in vitro* diagnostic assays. The flat bottom strips are designed to easily break apart and are pre-assembled in an "egg-crate" style strip holder that allows each individual well to be positioned back into the plate once broken.

- Stripwell plates have 96 well flat bottom polystyrene format
- Low volume and standard Stripwell microplates have well volumes of 190 µL and 360 µL, respectively
- 1 x 8 strips are designed to fit only one way into the strip holder, eliminating the chance of misorientation
- Accessories can be found beginning on page 65.

Stripwell Microplates Ordering Information

Stripwell Low Volume Microplates

Cat. No.	Color	Binding Property	Qty/Pk	Qty/Cs
2480	Clear	Medium	25	100
2481	Clear	High	25	100
2482	Black	Medium	25	100
2483	Black	High	25	100
2484	White	Medium	25	100
2485	White	High	25	100

Standard Stripwell Microplates

Cat. No.	Color	Binding Property	Qty/Pk	Qty/Cs
2592*	Clear	High	25	100
2593*	Clear	Medium	25	100
2580**	Clear	High	200	800
9102***	Clear	TC-Treated, Sterile	1	50
3913	White	Medium	25	100
3923	White	High	25	100
3914	Black	Medium	25	100
3924	Black	High	25	100

*Product has a certified surface chemistry
**Individual 1 x 8 Strips without frame, bulk packed
***Microplates individually packaged with lid

Surface Modified Stripwell Microplates, Clear

Cat. No.	Description	Surface Chemistry	Well Volume	Qty/Pk	Qty/Cs
2388	Amine	Amine	360 µL	1	50
2504	Universal-BIND™ Surface	Universal	360 µL	1	50
2506	DNA-BIND™ Surface	N-oxysuccinimide	360 µL	1	50
2508	Carbo-BIND™ Surface	Hydrazide	360 µL	1	50
2510	Sulfhydryl-BIND™ Surface	Maleimide	360 µL	1	50

Strip Accessories

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
2572	Strip Holder "egg crate"	No	5	20
2578	96 Well Strip Ejector	No	5	5

Color Coding

Corning offers customers the ability to color code their Stripwell microplates. Currently there are 14 colors available from which to choose on both our certified high and medium binding Stripwell plates. In addition to the clear strip, two other colors can be applied to the same plate. Color-coded Stripwell microplates are made to order and minimum order requirements do apply. If interested, please contact your local Corning representative.

96 WELL POLYPROPYLENE STORAGE MICROPLATES AND CLUSTER TUBES

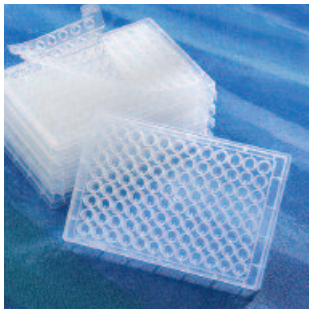
96 Well Polypropylene Microplates and Storage Blocks

Corning polypropylene microplates offer both small volume and large volume (blocks) well formats to meet assay and storage requirements.

- Flat, round or V-shaped well bottom
- Feature uniform skirt heights for greater robotic gripping surface
- Solvent resistant polypropylene provides compatibility with many common organic solvents (e.g., DMSO, ethanol, methanol)
- Certified DNase- and RNase-free
- Available sterile or nonsterile
- Refer to the Microplate Accessories section for information about microplate accessory products including sealing tapes and mats.

96 Well Polypropylene Microplate Dimensions and Well Volumes

Well Shape	Total Well Volume (µL)	Well Depth (mm)	Well Diameter (mm)	Plate Dimensions (L x W x H) (mm)
96 Well Flat Bottom	360	10.67	6.86	127.76 x 85.48 x 14.22
96 Well Round Bottom	360	11.3	6.86	127.76 x 85.48 x 14.22
96 Well V-bottom	320	11.13	6.86	127.76 x 85.48 x 14.22
96 Well V-bottom, Expanded Volume	450	12.43	8.50	127.76 x 85.48 x 14.35
96 Well 0.5 mL Block	500	25.3	6.86	127.76 x 85.48 x 27.18
96 Well 1 mL Block	1000	39.9	6.86	127.76 x 85.09 x 41.66
96 Well 2 mL Block	2000	42.04	8.13 (width)	128.27 x 85.85 x 43.94



Corning ClearPro Microplate (Cat. No. 3371) has higher clarity than standard polypropylene plates and allows users to visually inspect their samples in each well.

96 Well Polypropylene Microplate Ordering Information

Cat. No.	Plate Format	Color	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3355	Standard Plate	White	Round	No	25	100
3356	Standard Plate	Black	Round	No	25	100
3359	Standard Plate*	Clear	Round	Yes	25	100
3365	Standard Plate*	Clear	Round	No	25	100
3371	Corning® ClearPro™ Plate	Clear	Round	No	25	100
3364	Standard Plate	Clear	Flat	No	25	100
3343	Expanded Volume Plate	Clear	V	No	10	50
3344	Expanded Volume Plate	Clear	V	Yes	10	50
3357	Standard Plate	Clear	V	Yes	25	100
3363	Standard Plate	Clear	V	No	25	100

*Upgraded features include: superior clear polypropylene, lowered perimeter ridge for improved sealing, and added rigidity and dimensional stability for improved automated handling.

96 Well Polypropylene Storage Blocks with Storage Mat

96 Well Polypropylene Storage Block Ordering Information

Cat. No.	Plate Format	Well Volume	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3958	1 mL Round Well Block	1 mL	Round	Yes	5	25
3959	1 mL Round Well Block	1 mL	Round	No	5	100
3956	0.5 mL Round Well Block	0.5 mL	V	Yes	10	50
3957	0.5 mL Round Well Block	0.5 mL	V	No	100	100
3960	2 mL Square Well Block	2 mL	V	Yes	5	25
3961	2 mL Square Well Block	2 mL	V	No	5	100

Cluster Tube Systems

96 Well Cluster Tubes

- Composed of 96 polypropylene tubes in a standard microplate format
- Feature 1.2 mL tubes that are available individually or in strips of eight tubes
- Polyethylene tube caps are available in 8-cap strips

96 Well Cluster Tube Ordering Information

Cat. No.	Format	Sterile	Rack	Qty/Pk	Qty/Cs
4401	Individual	No	No	960/Bag	960
4408	8-Tube Strip	No	No	120/Bag	120
4410	Individual	No	Yes	96/Rack	960
4411	Individual	Yes	Yes	96/Rack	960
4412	8-Tube Strip	No	Yes	12/Rack	120
4413	8-Tube Strip	Yes	Yes	12/Rack	120
4418	8-Cap Strip	Yes	No	12/Bag	120

384 Well Microplates

Corning offers a variety of 384 well microplates for high throughput assays and storage. Microplates are grouped by application:

- 384 well assay microplates
  - General assays – Not treated, NBS™, high binding, and UV microplates
  - Cell-based assays – Tissue culture treated, Corning® CellBIND® Surface, and poly-D-lysine coated polystyrene microplates
- 384 well polypropylene storage microplates

This selection guide does not include 384 well microplates for PCR and genomics. Please refer to the Corning Genomics Selection Guide (page 73) or web site (**www.corning.com/lifesciences**) for further information on these products.

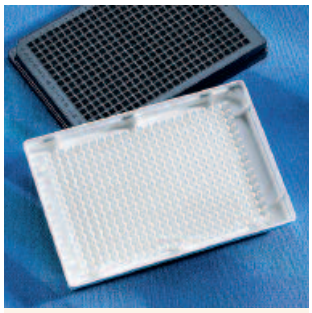
For additional microplate information, refer to *Selecting the Best Corning Microplate for Your Application* in the Overview section of this guide (page 47).

384 WELL ASSAY MICROPLATES

Corning offers a wide variety of assay microplates. They are organized into five groups:

- 384 Well Clear Polystyrene Microplates
- 384 Well Solid Black and White Polystyrene Microplates
- 384 Well Clear Bottom Black and White Polystyrene Microplates
- 384 Well UV Microplates

For assays performed in reduced volumes, Corning 384 well low volume polystyrene plates are available in solid round bottom and in black clear bottom formats.



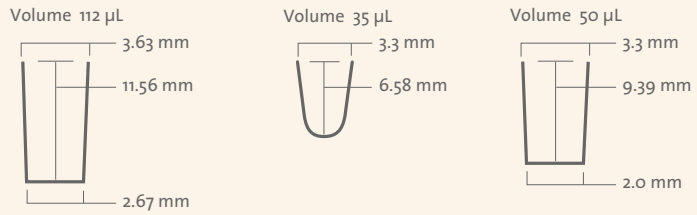
Low Volume 384 Well Solid Round Bottom Microplates

Unique well design for optimal assay performance

- Raised well bottom for higher sensitivity
- Raised rim for decreased wicking and contamination
- Round bottom for better Z factor and minimized trapped air
- Conical well molded in the shape of a light cone for efficiency

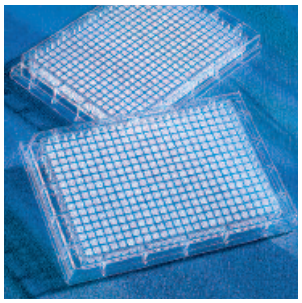
384 well plate types	Well Bottom Shape	Total Well Volume (µL)	Recommended Working Volume (µL)
Standard 384 well	Flat	112	20 to 80
Low volume 384 well, solid	Round	35	5 to 20
Low volume 384 well, clear bottom	Flat	50	5 to 40

- Corning 384 well polystyrene microplates have plate dimensions (length x width x height) of 127.76 x 85.48 x 14.22 mm that meet proposed industry standards



384 Well Geometry and Dimensions

Corning 384 well microplates for cell culture include tissue culture treated, Corning CellBIND Surface, and poly-D-lysine coated microplates. The tissue culture treated microplates have the same surface treatment used on other Corning cell culture vessels while the poly-D-lysine treatment improves attachment of anchorage-dependent cells. The new Corning CellBIND Surface treatment can provide improved consistency and even cell attachment.



384 Well Clear Microplates

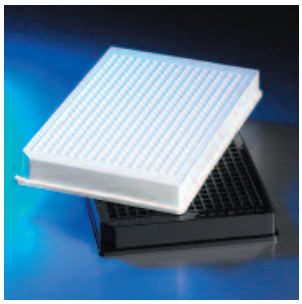
384 Well Clear Polystyrene Microplates

- Total well volume of 112 µL; working well volume of 20 to 80 µL
- Cell culture plates are sterilized by gamma radiation and certified nonpyrogenic
- The 384 well universal optics NBS™ plate is manufactured using an advanced polymer with high clarity and improved chemical resistant properties.
- Lids available as indicated. (Information on lids and other microplate accessories can be found beginning on page 65.)

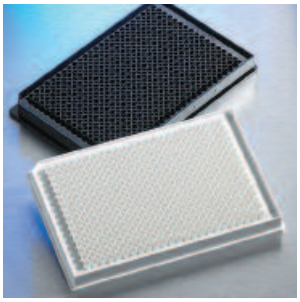
384 Well Clear Polystyrene Microplate Ordering Information

Cat. No.	Plate Format	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Qty/Cs
3640	Standard Plate	Flat	NBS	No	25	100
New 3640BC	Standard Plate with Bar Code Labels	Flat	NBS	No	25	100
3662	Clear Plate, with Lid	Flat	Poly-D-Lysine	Yes*	20	100
3680	Standard Plate, with Lid	Flat	Not Treated	Yes	20	100
3700	Standard Plate	Flat	High Bind	No	25	100
3701	Clear Plate, with Lid	Flat	TC-Treated	Yes	20	100
3702	Standard Plate	Flat	Not Treated	No	25	100
New 3702BC	Standard Plate with Bar Code Labels	Flat	Not Treated	No	25	100
3723	Universal Optics Plate (Standard)	Flat	NBS	No	25	100

*Aseptically manufactured.



384 Well Solid Low Flange Microplates



384 Well Low Volume Solid Microplates

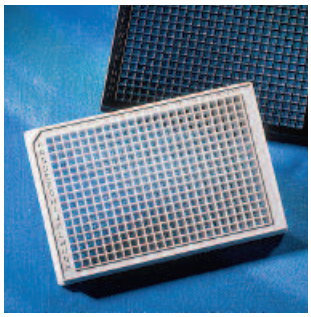
384 Well Solid Black and White Polystyrene Microplates

- Designed to reduce well-to-well crosstalk during fluorescent and luminescent assays

384 Well Solid Black and White Polystyrene Microplate Ordering Information

Cat. No.	Plate Format	Plate Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3673	Low Volume Plate	White	Round	NBS	No	25	100
3674	Low Volume Plate	White	Round	Not Treated	No	25	100
3676	Low Volume Plate	Black	Round	NBS	No	25	100
3677	Low Volume Plate	Black	Round	Not Treated	No	25	100
3678	Low Volume Plate	Black	Round	High Bind	No	25	100
New 3570	Solid White Plate, with Lid	White	Flat	TC-Treated	Yes	10	50
New 3571	Solid Black Plate, with Lid	Black	Flat	TC-Treated	Yes	10	50
New 3572	Standard Plate, Low Flange	White	Flat	Not Treated	No	10	50
New 3573	Standard Plate, Low Flange	Black	Flat	Not Treated	No	10	50
New 3574	Standard Plate, Low Flange	White	Flat	NBS	No	10	50
New 3574BC	Standard Plate, Low Flange with Bar Code Labels	White	Flat	NBS	No	10	50
New 3575	Standard Plate, Low Flange	Black	Flat	NBS	No	10	50
New 3575BC	Standard Plate, Low Flange with Bar Code Labels	Black	Flat	NBS	No	10	50
New 3820	Low Volume Plate	Black	Flat	NBS	No	10	50
New 3821	Low Volume Plate	Black	Flat	Not Treated	No	10	50
New 3821BC	Low Volume Plate with Bar Code Labels	Black	Flat	Not Treated	No	10	50
New 3822	Low Volume Plate, with Lid	Black	Flat	TC-Treated	Yes	10	50
New 3824	Low Volume Plate	White	Flat	NBS	No	10	50
New 3824BC	Low Volume Plate with Bar Code Labels	White	Flat	NBS	No	10	50
New 3826	Low Volume Plate with Lid	White	Flat	TC-Treated	Yes	10	50
New 3826BC	Low Volume Plate with Lid and Bar Code Labels	White	Flat	TC-Treated	Yes	10	50

384 Well Clear Bottom Black and White Polystyrene Microplates



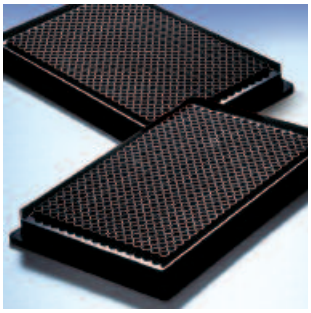
384 Well Clear Bottom Black and White Microplates

- Suited for fluorescent and luminescent assays using either top or bottom detection plate readers

384 Well Clear Bottom Black and White Microplate Ordering Information

Cat. No.	Plate Format	Plate Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3540	Low Volume	Black	Flat	Not Treated	No	10	50
3542	Low Volume, Clear Bottom Plate with Lid	Black	Flat	TC-Treated	Yes	10	50
3544	Low Volume	Black	Flat	NBS	No	10	50
New 3643	Low Volume	Black	Flat	Poly-D-Lysine	Yes	10	50
3653	Standard Plate	White	Flat	NBS	No	25	100
3663	Clear Bottom Plate with Lid	White	Flat	Poly-D-Lysine	Yes*	20	100
3664	Clear Bottom Plate with Lid	Black,	Flat	Poly-D-Lysine	Yes*	20	100
3655	Standard Plate	Black	Flat	NBS	No	25	100
New 3683	Clear Bottom Plate with Lid	Black	Flat	CellBIND® Corning® Surface	Yes	10	50
3706	Standard Plate	White	Flat	Not Treated	No	25	100
3707	Clear Bottom Plate with Lid	White	Flat	TC-Treated	Yes	20	100
3711	Standard Plate	Black	Flat	Not Treated	No	25	100
3712	Clear Bottom Plate with Lid	Black	Flat	TC-Treated	Yes	20	100
3985	Optical Imaging Plate with Clear Bottom and Lid	Black	Flat	TC-Treated	Yes	20	100
New 3895BC	Optical Imaging Plate with Clear Bottom, Lid and Bar Code Labels	Black	Flat	TC-Treated	Yes	20	100

*Aseptically manufactured



384 Well Low Volume Black Clear Bottom Microplates

384 Well UV Microplate

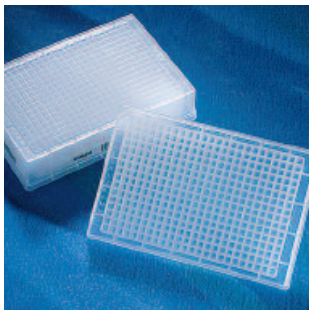
- Offers certified performance at 260 to 280 nm
- Provides consistently low background and well to well uniformity
- Performance approaches that of quartz cuvettes. Certified DNase- and RNase-free

384 Well UV Microplate Ordering Information

Cat. No.	Plate Format	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3675	Standard Plate	Flat	No	5	25

384 WELL POLYPROPYLENE STORAGE MICROPLATES

384 Well Polypropylene Storage Microplates



384 Well Polypropylene Storage Microplates

Corning polypropylene microplates offer both small volume and large volume (blocks) well formats to meet assay and storage requirements.

384 Well Polypropylene Microplate Dimensions and Well Volumes

Well Shape	Total Well Volume (µL)	Well Depth (mm)	Well Diameter (mm)	Plate Dimensions (L x W x H) (mm)
384 Well Low Volume Low Profile Plate	20	6.30	3.30	127.76 x 85.48 x 10.00
384 Well Round Bottom Plate	95	11.56	3.63	127.76 x 85.48 x 14.22
384 Well Round Bottom Block	180	25.11	3.63	127.76 x 85.48 x 27.81
384 Well V-Bottom Block	240	22.31	3.30*	127.76 x 85.48 x 24.73

*Width of square well.

- Resistant to many common organic solvents (e.g., DMSO, ethanol, methanol)
- Black polypropylene microplate (Cat. No. 3658) is ideal for fluorescent assays requiring solvent resistance
- Certified DNase- and RNase-free
- Refer to the Microplate Accessories section for information about microplate accessory products including sealing tapes and mats.

384 Well Polypropylene Microplate Ordering Information

Cat. No.	Plate Format	Well Bottom	Well Volume (µL)	Sterile	Qty/ Pk	Qty/ Cs
3656	Standard Plate, Clear	Round	95	Yes	25	100
3657	Standard Plate, Clear	Round	95	No	25	100
3658	Standard Plate, Black	Round	95	No	25	100
3672	Low Volume, Low Profile, Clear	Conical	20	No	10	50

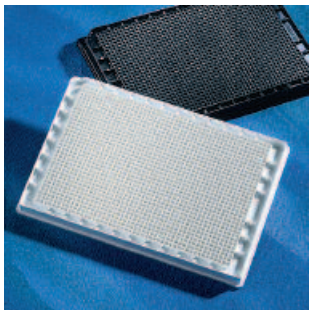
384 Well Polypropylene Storage Block Ordering Information

Cat. No.	Plate Format	Well Bottom	Well Volume (µL)	Sterile	Qty/ Pk	Qty/ Cs
3964	384 Well Block, Clear	Round	180	Yes	5	25
3965	384 Well Block, Clear	Round	180	No	5	100
3342	384 Well Block, Clear	V	240	Yes	5	50
3347	384 Well Block, Clear	V	240	No	5	50

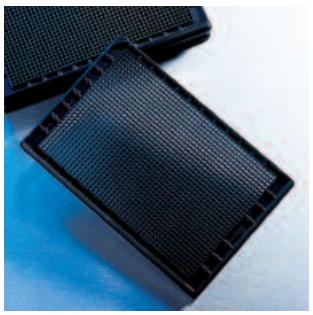
1536 Well Microplates

Corning® 1536 well microplates are our highest density microplates available for high throughput screening. The microplates conform to standard microplate footprint and dimensions. These microplates are offered in solid black and white polystyrene plates, with round or flat bottoms, and in black clear bottom formats.

Corning also offers a ultra-thin 1536 well microplate with a total well volume of 2 µL. This uniquely designed plate represents leading edge technology in assay miniaturization, with the length and width dimensions and microplate footprint meeting industry standards.



1536 Well Solid Round Bottom Microplates



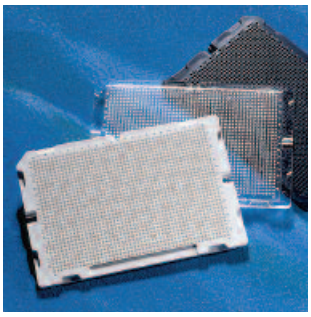
1536 Well Black Clear Bottom Microplates

1536 Well Standard Polystyrene Microplates

- Total well volume of 10 µL for round well plates and 12.8 µL for flat bottom plates
- Recommended working volume of up to 8 µL
- Round well bottoms for reduced air entrapment and improved CVs and Z factor
- Raised well bottoms for higher sensitivity
- Flood reservoir on four sides to reduce instrument contamination
- Lids are available separately. Corning lid Cat. No. 3098 is compatible with these plates. (Information on lids and other microplate accessories can be found beginning on page 65.)

1536 Well Polystyrene Microplate Ordering Information

Cat. No.	Plate Format	Plate Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ /Cs
3936	Standard Plate	Black	Round	Not Treated	No	10	50
3937	Standard Plate	White	Round	Not Treated	No	10	50
3724	Standard Plate	Black	Flat	Not Treated	No	10	50
New 3724BC	Standard Plate with Bar Code Labels	Black	Flat	Not Treated	No	10	50
3725	Standard Plate	White	Flat	Not Treated	No	10	50
New 3725BC	Standard Plate with Bar Code Labels	White	Flat	Not Treated	No	10	50
3726	Standard Plate with Lid	Black	Flat	TC-Treated	Yes	10	50
3727	Standard Plate with Lid	White	Flat	TC-Treated	Yes	10	50
New 3727BC	Standard Plate, with Lid and Bar Code Labels	White	Flat	TC-Treated	Yes	10	50
3728	Standard Plate	Black	Flat	NBS™ Surface	No	10	50
New 3728BC	Standard Plate with Lid and Bar Code Labels	Black	Flat	NBS Surface	No	10	50
3729	Standard Plate	White	Flat	NBS Surface	No	10	50
New 3729BC	Standard Plate with Bar Code Labels	White	Flat	NBS Surface	No	10	50
3891	Clear Bottom	Black	Flat	Not Treated	No	10	50
New 3891BC	Clear Bottom with Bar Code Labels	Black	Flat	Not Treated	No	10	50
3893	Clear Bottom with Lid	Black	Flat	TC-Treated	Yes	10	50
New 3893BC	Clear Bottom with Lid and Bar Code Labels	Black	Flat	TC-Treated	Yes	10	50
3895	Clear Bottom	Black	Flat	NBS Surface	No	10	50



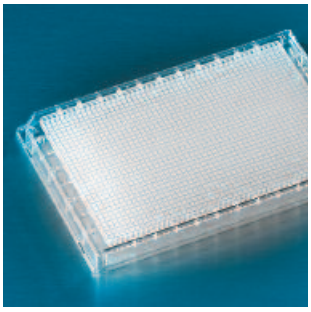
1536 Well 2 µL Polystyrene Microplates

1536 Well 2 µL Polystyrene Microplates

- A variety of assays, including enzyme assays, receptor-ligand assays, and cell-based assays have been effectively performed in these plates.
- Recommended working volume of up to 1.5 µL
- The plates are demarcated in a 8 x 12 array with each square containing 16 wells
- Eight extra wells on both the left and right sides of the plate that can be used to run controls
- Series of notches that allow stacked plates to be easily separated from one another
- Lids are available separately, Cat. No. 3849. (Information on lids and other microplate accessories can be found beginning on page 65.)

1536 Well 2 µL Polystyrene Microplate Ordering Information

Cat. No.	Plate Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3850	Low Volume Plate	Clear	Flat	Not Treated	No	20	100
3851	Low Volume Plate	Black	Flat	Not Treated	No	20	100
3852	Low Volume Plate	White	Flat	Not Treated	No	20	100
3853	Low Volume Plate	Clear	Flat	TC-Treated	Yes	20	100
3854	Low Volume Plate	Black	Flat	TC-Treated	Yes	20	100
3855	Low Volume Plate	White	Flat	TC-Treated	Yes	20	100
3857	Low Volume Plate	White	Flat	High Bind	No	20	100
3858	Low Volume Plate	Clear	Flat	High Bind	No	20	100



1536 Well Echo Microplate

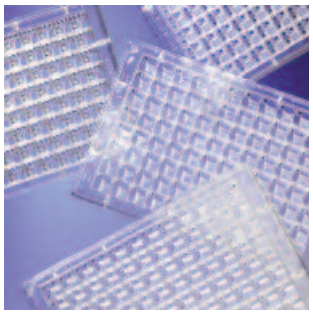
1536 Well Echo™ Qualified Microplate

- Corning-Labcyte joint development delivers optimal acoustic performance on the Labcyte Echo 550 Compound Reformatter
- Plates lot tested and certified to meet performance specifications
- Enhanced flatness provides low intra- and inter-plate CVs
- Low flange base is designed for bar code customization and robotic handling

Corning® 1536 Well Echo Qualified COC Microplate Ordering Information

Cat No.	Description	Well Bottom	Surface	Sterile	Qty/Pk	Qty/Cs
New 3730	1536 Well Clear COC Plate	Flat	Not Treated	No	10	50

Protein Crystallization Microplates



96 Well Crystal*EX* Microplates

- Corning® 96 and 384 well crystallization microplates are optimized for high throughput protein crystal growth and screening
- Designed for sitting drop applications
- Meet 96 and 384 well microplate standards for automation

Next Generation Crystal*EX*™ Microplates for 96 Well High Throughput Sitting Drop Protein Crystallization

- Conforms to SBS specifications for full compatibility in automated crystal screening
- Multiple formats and versatility for custom options to maximize crystal formation, identification and analysis, and harvesting
  - Choose from five unique protein well shapes
  - Available in two materials, including a special zero polarization polymer (PZero)
  - Options include 1, 3, or 5 protein wells per reservoir well
- PZero polymer is superior for zero background polarization and nonbirefringence
- COC polymer offers strong chemical compatibility and good optical clarity
- Reservoir numbers are embossed on each individual well for easy identification

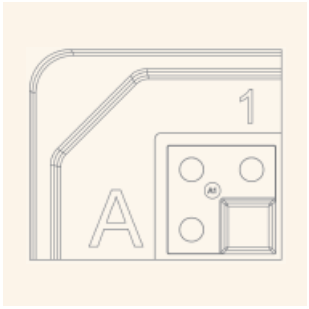
Next Generation Crystal*EX* Microplate Designs

One reservoir well is flanked by either one, three, or five protein wells, with SBS-standard spacing between the centers of adjacent well clusters.

1 Protein Well
1 Reservoir

3 Protein Wells
1 Reservoir

5 Protein Wells
1 Reservoir



Alphanumeric markers in each well cluster for easy identification under the microscope.

Five different protein well shapes are available:

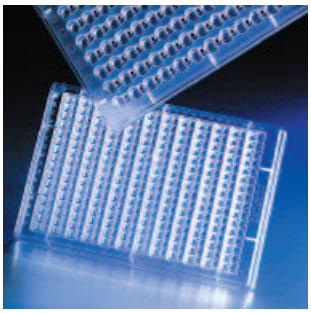
Round Bottom | Conical Flat Bottom | Flat Bottom | 2 µL Conical Flat – Crystal Cup* | 1 µL Conical Flat – Crystal Cup*

*The crystal cup facilitates collection and centering of the protein crystals after incubation.

Corning Next Generation Crystal*EX* Microplates Ordering Information

Cat. No.	Protein Well Size	Protein Well Shape	No. of Protein Wells	Material	Treated	Qty/ Pk	Qty/ Cs
3556	4 µL	Round	1	COC	No	10	50
3551	4 µL	Conical flat	1	COC	Yes*	10	50
3840	2 µL	Conical flat	3	COC	No	10	50
3552	2 µL	Round	3	PZero	No	10	50
3553	2 µL	Conical flat	3	PZero	No	10	50
3554	2 µL	Flat	3	PZero	No	10	50
3555	2 µL	Conical flat – crystal cup	3	PZero	No	10	50
3550	1 µL	Conical flat – crystal cup	3	PZero	No	10	50
3557	1 µL	Conical flat – crystal cup	5	PZero	No	10	50

*Surface processed for hydrophilicity.



96 and 384 Well Protein Crystallization Microplates

96 Well Crystal*EX*™ Crystallization Microplates

- Features 96 large reservoir (reagent) wells and 96 corresponding protein wells
- Conical bottom protein wells allow for improved centering of the protein drop
- Compatible with manual pipettors and automation
- Novel merged well design provides efficient vapor space for protein crystallization

384 Well Crystal*EX* Crystallization Microplates

- Meets industry standards for 384 well microplate footprint and well locations
  - Ideal for fully automated crystal screening
- Features 192 reservoir wells and 192 corresponding protein wells
- Flat bottom protein wells are optimized for imaging of crystals
- Reservoir and protein wells are positioned to be compatible with multi-head dispensing equipment (up to 96 well heads)

96 and 384 Well Crystal*EX* Crystallization Microplate Ordering Information

Cat. No.	Plate Format	Reservoir Well Volume (µL)	Protein Well Volume (µL)	Sterile	Qty/ Pk	Qty/ Cs
3773	96 Well Plate, Conical Bottom	210	10	No	10	50
3785*	96 Well Plate, Conical Flat Bottom, Treated	210	7	No	10	50
3775	384 Well Plate, Flat Bottom	100	3.4	No	10	50

*Surface processed for hydrophilicity

96 Well Crystallization Microplate with Universal Optical Sealing Tape

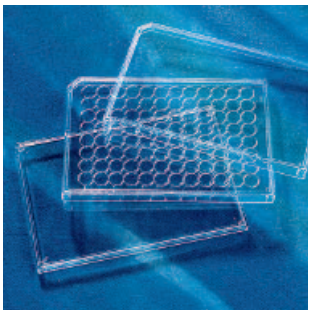
Universal Optical Sealing Tape for Next Generation Crystal*EX* and Crystal*EX* Microplates

- High optical quality, pressure-sensitive tape ensures tight sealing to minimize evaporation
- Ideal for microscopic observation of crystals
- Suitable for use between -70°C and 100°C
- Compatible with commonly used aqueous solutions and organic solvents

Accessory for Next Generation Crystal*EX* and Crystal*EX* Microplates

Cat. No.	Description	Qty/Pk	Qty/Cs
6575	Universal Optical Sealing Tape	100	100

Microplate Accessories



Lids

Optimizing Sealing Conditions on Corning Polypropylene Microplates

Corning offers an application note (Corning Literature No. ALSP-AN-011) describing effective sealing with the ABgene® ALPS-100 automated plate sealer.

Lids

- All lids are made of rigid polystyrene except where indicated
- All lids have a corner notch on the A1 corner (except where indicated) to correspond to the corner notches found on all Corning® microplates
- The Universal Lid without a corner notch (Cat. No. 3098) does not need to be oriented in any particular direction to be placed on Corning plates. The lid also has a shorter skirt than standard lids
- The black Universal Lid (Cat. No. 3935) is suitable for fluorescent and other light-sensitive assays
- The DMSO-resistant cyclic-olefin lid (Cat. No. 3085) is tinted amber in color for light-sensitive assays and is 100% DMSO-resistant

Microplate Lid Ordering Information

Cat. No.	Description	Plate Compatibility	Sterile	Qty/ Pk	Qty/ Cs
3930	Low Evaporation Lid with Corner Notch and Condensation Rings	96 well microplates only (not 2 mL block)	Yes	1	100
3931	Low Evaporation Lid with Corner Notch and Condensation Rings	96 well microplates only (not 2 mL block)	Yes	25	50
3098	Universal Lid without Corner Notch	All microplates	Yes	25	100
3099	Universal Lid with Corner Notch	All microplates	Yes	25	50
3935	Black Universal Lid with Corner Notch	All microplates	Yes	25	50
3085	DMSO-resistant Cyclic-olefin Lid without Corner Notch	All microplates	No	25	50
3849	1536 Well 2 µL Lid	2 µL 1536 Well Microplates only	Yes	20	100

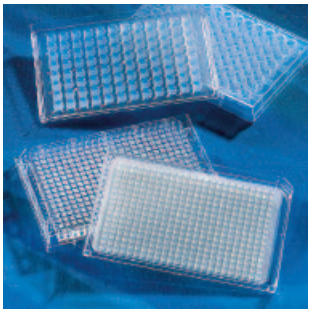
Corning Storage Mat Applicator

Storage Mats and Accessories

- Multiple formats are offered for specific and precise fit on 96 and 384 well plates and blocks
- Storage Mats Cat. Nos. 3080 and 3083 are manufactured from DMSO-resistant EVA (ethyl vinyl acetate) polymer
- Certified DNase- and RNase-free
- Can be applied manually or with Storage Mat Applicator

Storage Mats and Accessories Ordering Information

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
3080	Round Well Storage Mat for 96 Well Plates and Blocks	No	25	100
3083	Square Well Storage Mat for Corning 2 mL Square Blocks	No	1	50
3346	Storage Mat for Expanded Volume 96 Well Microplates	No	10	50
3341	Storage Mat for 384 Well V-Bottom Blocks	No	10	50
3081	Storage Mat Applicator	N/A	1	1



96 and 384 Well Robolids

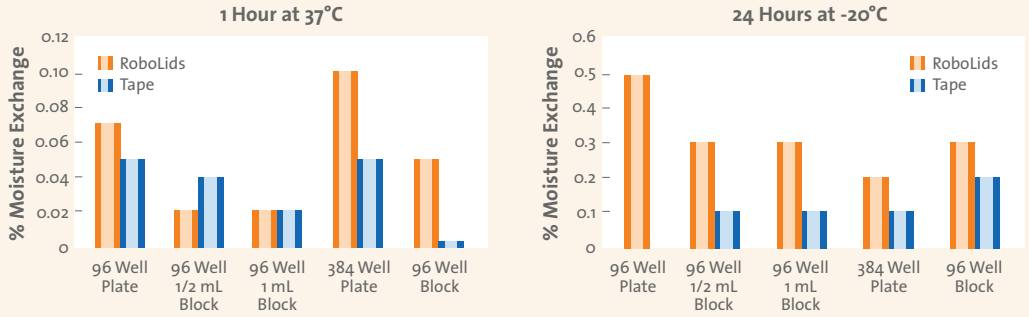
Robolids

- Combines the sealing ability of a storage mat with the rigidity of a plastic lid
- Designed for repeated application and removal by automation and to prevent short-term evaporation
- Silicone sealing plugs for organic solvent resistance and low extractables
- Can be used manually or with automation

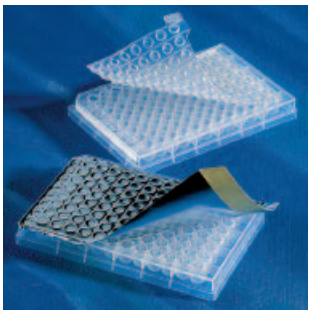
Robolid Ordering Information

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
3090	96 Well Robolid with Corner Notch	No	25	50
3089	384 Well Robolid with Corner Notch	No	25	50

Moisture Exchange with Corning® Robolids



Using 100% DSMO, graphs represent the percentage of moisture exchange over a period of time and at various temperatures using aluminum sealing foil and the Robolid. Results show the 96 and 384 well Robolid having comparable results with the aluminum foil. Robolids validated for low percentage of moisture exchange similar to that of foil; the product is not recommended to be used in applications requiring an integral seal.



Sealing Mats and Tapes

Sealing Tapes

- Easy application and removal for short- and long-term storage
- Provide tight seal to minimize evaporation and condensation
- Acetate Sealing Tape (Cat. No. 3095) is suitable for use between -16°C and 38°C, is transparent, and is not pierceable
- Aluminum Sealing Tape (Cat. No. 6569, 6570) is suitable for use between -80°C and 150°C, is not transparent, and is pierceable
- Breathable Sealing Tape (Cat. No. 3345) allows gas exchange across the surface
- Universal Optical Sealing Tape (Cat. No. 6575) is suitable for use between -70°C and 100°C, and is transparent

Sealing Tape Ordering Information

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
3095	Acetate Sealing Tape for all Microplates	No	100	100
6524	Polyethylene Sealing Tape	No	100	100
6570	Aluminum Sealing Tape for 96 Well Microplates	No	100	100
6569	Aluminum Sealing Tape for 384 Well Microplates	No	100	100
3345	Breathable Sealing Tape	Yes	50	500
6575	Universal Optical Sealing Tape	No	100	100

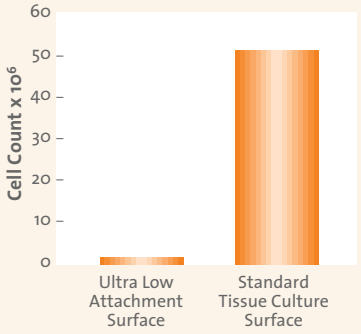
Technical Appendix

Corning® Assay Surface Properties and Applications

Corning Surface	Applications	Binding Interaction	Sample Properties	Performance Criteria
FOR BIOCHEMICAL ASSAYS				
NBS™ coated polystyrene surface	◗ SPA assays ◗ Homogeneous assays	None – Inhibits hydrophobic and ionic interactions	Significantly reduces (<2 ng/cm²) protein and nucleic acid binding	95% reduction of nonspecific binding of protein compared to untreated polystyrene
Medium Binding (Untreated) modified polystyrene surface	◗ Homogeneous and heterogeneous assays	Hydrophobic	Large biomolecules >20kD with large or abundant hydrophobic regions	96w clear: Well to well CV ≤ 5% 96w black: Well to well CV ≤ 15% (HT) Well to well CV ≤ 3% (HO) 96w white: Well to well CV ≤ 8% (HT) Well to well CV ≤ 5% (HO) 384w clear: Well to well CV ≤ 10% (HT) 384w black and white: Well to well CV ≤ 15% (HT) Well to well CV ≤ 5% (HO)
High Binding modified polystyrene surface	◗ ELISA and other heterogeneous assays	Hydrophobic and ionic (negatively charged)	Improves binding of medium to large biomolecules (>10kD) that are positively charged with or without hydrophobic regions.	96w clear: Well to well CV ≤ 3% 96w black: Well to well CV ≤ 8% 96w white: Well to well CV ≤ 10% 384w clear: Well to well CV ≤ 10% 384w black and white: Well to well CV ≤ 15%
Aminated-modified polystyrene surface	◗ Used with bifunctional crosslinkers (i.e., glutaraldehyde, carbodiimide) to covalently couple to functional groups (primary amines, thiols, and carboxyls) on biomolecules.	Hydrophilic and ionic (positively charged); allows covalent immobilization	Small negatively charged biomolecules OR biomolecules possessing an appropriate functional amine, carboxyl or thiol group.	CV ≤ 5% Percent Covalent Coupling ≥ 95%
DNA-BIND® modified polystyrene surface	◗ Immobilization of aminated DNA for use in nucleic acid hybridization assays and solid-phase PCR ◗ Immobilization of peptides and other small primary amine containing molecules	Allows covalent immobilization to amine groups via binding to NOS groups	Small to medium biomolecules, especially DNA, possessing an available amine group.	CV ≤ 15%
Sulfhydryl-BIND™ modified polystyrene surface	◗ Assays requiring site-directed orientation of a particular biomolecule, especially antibodies	Allows covalent immobilization via SH moieties on maleimide groups	Biomolecules possessing an accessible sulfhydryl group or reducible disulfide bond.	CV ≤ 15% Activated/NonActiviated ≥ 2.0 Activated = reduced disulfide bonds
Carbo-BIND™ modified polystyrene surface	◗ Assays requiring site-directed orientation of a particular biomolecule (oxidized antibodies, carbohydrates and glycosylated proteins) while maintaining enzymatic or immunological activity	Allows covalent immobilization via binding to hydroxide groups	Biomolecules possessing carbohydrate moieties available for periodate activation.	CV ≤ 15% Activated/Non-activated ≥ 3.0 Activated = periodate activation
Universal-BIND™ modified polystyrene surface	◗ Immobilization of double-stranded DNA ◗ Immobilization of antigens of unknown structure (available functional groups unidentified) ◗ Immobilization of samples containing a mixture of biomolecules, such as cell lysate samples ◗ Immobilization of other nonprotein-aceous molecules, such as glycolipids	Allows covalent immobilization via UV cross-linking to abstractable hydrogen	Biomolecules with abstractable hydrogen.	CV ≤ 15% Activated/Non-Activated ≥ 2.0 Activated – by UV
FOR CELL-BASED ASSAYS				
Standard Tissue Culture Surface	◗ Assays using standard attachment dependent cell lines	Hydrophilic and ionic interactions (negatively charged)	Allows cell attachment and binding	≥95% confluency (attachment dependent cell line)
Corning® CellBIND® Surface	◗ Assays for difficult to attach cells ◗ Help cells stay attached during washing steps	Hydrophilic and ionic interactions (negatively charged)	Enhances cell attachment uniformity and binding to polystyrene	96 Well Plates: CV ≤10%; Wells with cells/wells without cells – 2X signal from MTS assay 384 Well Plates: CV ≤20%: Wells with cells/wells without cells – 2X signal from MTS assay
Poly-D-Lysine-Coated Surface	◗ Assays for difficult to attach cells ◗ Help cells stay attached during washing steps	Hydrophilic and ionic interactions (positively charged)	Enhances cell attachment and binding	96 Well: CV ≤15%; PDL/TCT ≤2.0 serum free HEK cells 384 Well: CV ≤ 20%; PDL/TCT ≥1.5 serum free HEK cells
Ultra-Low Attachment Surface	◗ Assays where preventing cell attachment is required ◗ Hybridoma production and clonal isolation by limiting dilution	Nonionic hydrogel layer reduces or eliminates ionic and hydrophobic binding	Prevents or reduces cell attachment and binding	≥95% cell attachment inhibition
Ultra-Web™ Surface	◗ Assays where cell attachment or performance is enhanced by using a 3D surface	Hydrophilic interactions on a 3D surface	Enhances cell attachment and performance	
Ultra-Web Polyamine Surface	◗ Assays where cell attachment or performance is enhanced by using a 3D surface	Hydrophilic and ionic interactions (positively charged) on a 3D surface	Enhances cell attachment and performance	

Technical Appendix (CONTINUED)

Corning® Ultra-Low Attachment Microplate (Cat. No. 3474) has a covalently bonded hydrogel layer to minimize cell attachment, protein absorption, enzyme activation and cellular activation. The surface is noncytotoxic, biologically inert, and nondegradable.



Comparison of Cell Attachment in Ultra-Low vs. Standard Tissue Culture Treated Plates

Vero cells plated at 2.6 x 10^6 cells per well grown for 4 days at 37°C in a 5% CO_2 environment show a 99% reduction in cellular attachment vs. standard culture treated product.

High Binding Plate Certification of Corning EIA/RIA Microplates

Corning offers 96 well EIA/RIA plates and Stripwell™ microplates manufactured from a special medical grade polystyrene for uniform binding, high optical clarity, and low background absorption.

Certification Standards	High Binding	Medium Binding (Not Treated)
Well-to-well coefficient of variation (CV)	≤3%	≤5%
Average high and low wells from the mean	≤8%	≤15%
Background absorbance units from the mean	±0.005	±0.005

Corning high binding plates have a binding capacity of approximately 500 ng of mouse IgG/cm^2. The nontreated plates have a binding capacity of approximately 250 ng of Mouse IgG/cm^2. Corning tests its EIA/RIA plates on a lot-to-lot basis and the certification results for each lot are made available upon request by contacting your local Corning Life Sciences office. In addition, five ELISA Technical Bulletins are available at **www.corning.com/lifesciences**.

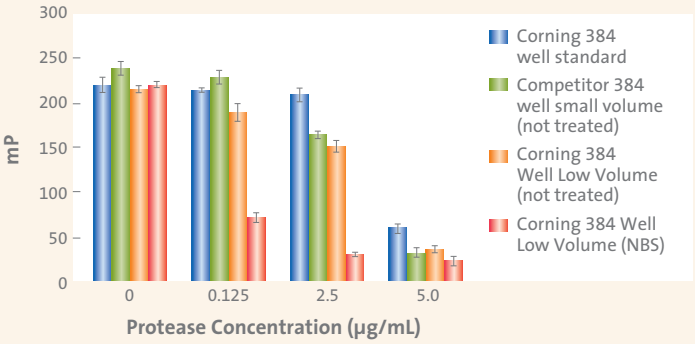
NBS Binding Performance

NBS microplates have a nonionic hydrophilic well surface, and are ideal for minimizing protein binding in homogeneous assays.

Binding in ng/cm^2	^{125}I-IgG	^{125}I-BSA	^{125}I-Insulin	^{32}P-oligo DNA	^{32}P-λ phage DNA
Polystyrene	400	450	310	22	6
Polypropylene	380	440	370	3	<2
NBS on Polystyrene	<2.5	<2.5	5	<2	<2

Benefits of NBS™ on Homogeneous Assays

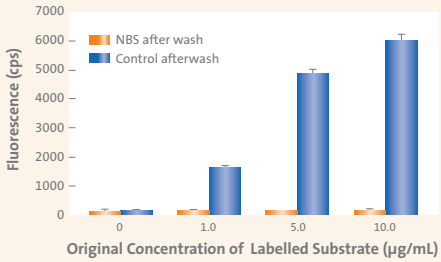
Fluorescence-based Assay Performance with Corning® NBS™ Low Volume Microplates



Higher Sensitivity for Fluorescence Polarization Assays with 384 Well Corning NBS Low Volume Microplates (Cat. No. 3676)

Data demonstrates *Streptomyces griseus* protease activity on BODIPY fluorescent labeled (FL) casein substrate. Protease activity is measured as a reduction in millipolarization (mP) units. A significant reduction in fluorescence polarization was observed at the lowest concentration of enzyme in a 10 µL volume.

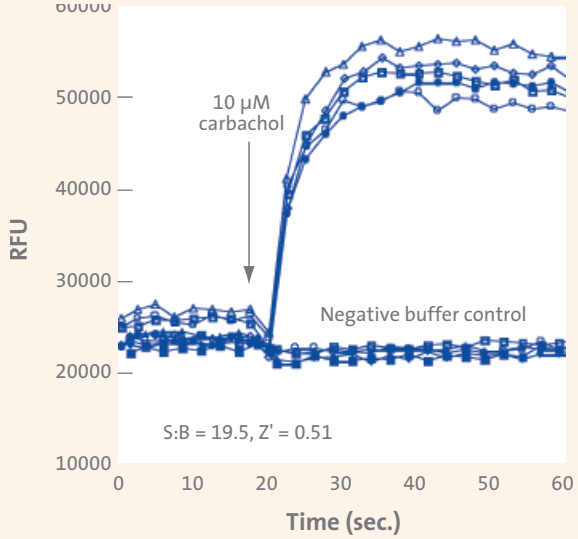
Reduced Nonspecific Protein Binding with Corning NBS Microplates



NBS Surface Significantly Reduces Nonspecific Binding of a BODIPY FL Casein Substrate to Corning Microplates

Dilutions of BODIPY FL casein in digestion buffer were incubated for 30 min at room temperature in black Corning untreated and NBS microplates (Cat. No. 3654). Control wells contained digestion buffer only. Microplates were washed 3 times with PBS, pH 7.4, and 200 µL/well of digestion buffer alone was added to the wells. Fluorescence intensity was measured.

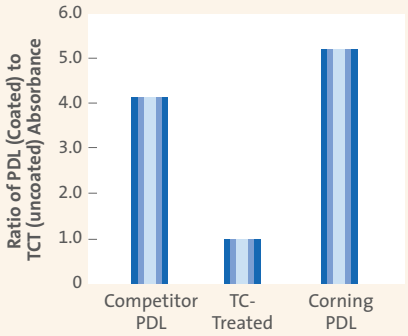
Miniaturization of Calcium Mobilization Assay in Corning 384 Well Low Volume Black Clear Bottom Tissue Culture Treated Microplate (Cat. No. 3542)



The chromatograms shown here are the rapid increase of calcium signals in Transfected CHO-K1 cells upon the addition of carbachol (n=5 wells). Transfected CHO-K1 cells of M1WT2 (ATCC, CRL-1984) were seeded at 5,000 cells per well in 10 µL medium and then grown in standard CO_2 incubator overnight (37°C). After the addition of 10 µL calcium dye solution per well, the plates were incubated in 37°C for 30 min. After equilibrating to RT for 30 min, plates were loaded to Flexstation reader (Molecular Devices, Inc.). Five µL of 50 µM carbachol solution (final concentration 10 µM) was transferred to induce the response (or 5 µL of plain buffer for the negative controls). The calcium signal was monitored for 60 sec. Assay was performed with Calcium 3 kit (Molecular Devices, Inc.).

Technical Appendix (CONTINUED)

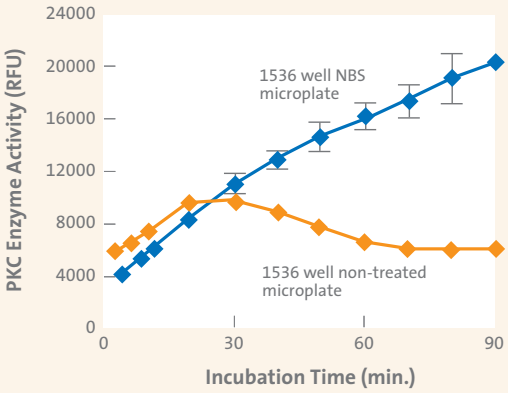
Performance of Corning® 384 Well Poly-D-Lysine Microplate (Cat. No. 3664)



Corning 384 Well Poly-D-Lysine (PDL) Microplates have over 60% more cell attachment capacity than those of a leading competitor. Comparison of cell attachment capacity with Corning PDL coated plates to competitor's PDL coated plates and uncoated TC-treated plates. BHK-21 cells (1 x 10^4 cells/well) were incubated in 25 µL of DMEM F-12 media in 8 replicate wells for 1 hour (37°C, 5% CO_2) on 384 well black/clear bottom microplates.

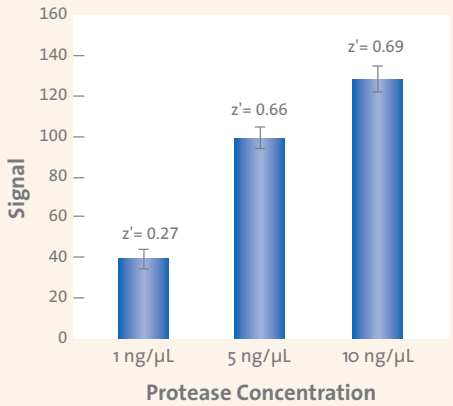
Data provided by Sigma-Aldrich Corporation. Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications.

Improved Kinase Performance with Corning 1536 Well Solid Black NBS Microplate (Cat. No. 3728)



The fluorescence of the fluorogenic substrate is quenched in this assay. Upon phosphorylation, the quenching mechanism is released, resulting in a significant increase in fluorescence intensity (FI), and therefore, kinase activity can be monitored continuously. The total reaction volume was 8 µL and contained 20 mM Tris-HCl (pH 7.6), 5 mM $MgCl_2$, 5 mM DTT, 10% Lipid Activator, 6 µM fluorogenic substrate, 10 µM ATP and 50 pg/mL PKC β-II. Signals were measured by Acquest™ reader (Molecular Devices, Inc.). The PKC assay was developed by Applied Biosystems, Inc.

Performance of Corning 1536 Well 10 µL Round Well Microplate (Cat. No. 3936)



Fluorescent Polarization Assay on Corning 1536 10 µL Assay Microplate 10 ng/µL, 5 ng/µL and 1 ng/µL of *Streptomyces griseus* protease were incubated with 2.0 ng/µL of BODIPY FL casein substrate in 5 µL volumes for 10 minutes at room temperature. (Corning 1536 Well 10 µL black microplate, untreated, Cat. No. 3936).

Selected Corning Technical Literature

All literature is available in PDF file format at **www.corning.com/lifesciences**.

Assay Microplates

Binding Comparison of Polymer Surfaces: Introducing Non-Binding Surface Microplates

Corning® 96-well NBS™ microplates are ideal for homogeneous assays in high throughput screening. Studies of protein and nucleic acid binding to the NBS, when compared to polystyrene and polypropylene surfaces, demonstrate significant reduction in nonspecific binding.

Chemiluminescent HRP-Based Assay Using Corning White Microplate

A comparison of the performance of white microplates from several microplate manufacturers to that of Corning 96 well white microplate using a model HRP based luminescent assay system.

Corning Non-Binding Surface Microplates for Fluorescent HTS Assays

This 4-page technical note evaluates the efficacy of the Corning NBS microplate for use in a homogeneous fluorescence polarization protease assay.

Corning Non-Binding Surface Treatment to Reduce Non-Specific Binding To Microplates

This 2-page technical note evaluates Corning NBS microplates for Scintillation Proximity Assays.

Corning 384 Well Low Volume Microplate Performance in Miniaturized Assays

This technical note describes the performance of Low Volume microplates using a homogeneous fluorescence polarization assay at low volumes.

Design and Performance of the Corning 2 µL 1536 Well Plate

This 2-page technical note describes the design features and performance criteria for Corning 2 µL 1536 well microplates.

Fluorescent Polarization Kinase Assay Miniaturization in Corning 96 Well Half Area and 384 Well Microplates

This 4-page technical note examines assay miniaturization in Corning 96 well, 96 well Half Area, and 384 well microplates using fluorescence polarization tyrosine kinase assays.

Cell Culture Microplates

Helpful Hints to Manage Edge Effects of Cultured Cells for High Throughput Screening

This technical note is a compendium of techniques, collected from Corning Cell Culture facilities and customers, to reduce the occurrence of irregular patterns of cell adhesion or "edge effect" in microplates.

Poly-D-Lysine Coated Microplates

This 2-page application report describes binding and performance characteristics, and provides operating protocols for Corning's poly-D-lysine microplates.

Immunoassay Microplates

Corning offers five ELISA Technical Bulletins:

- Immobilization Principles — Selecting the Surface
- Optimizing the Immobilization of Protein and other Biomolecules
- Effective Blocking Procedures
- Optimizing the Separation Step on 96 Well Microplates
- Selecting the Detection System – Colorimetric, Fluorescent, Luminescent

Storage Applications

Corning ClearPro™ 96 Well Polypropylene Microplates

This 4-page technical note describes the heat sealing and storage performance characteristics for Corning ClearPro microplates.

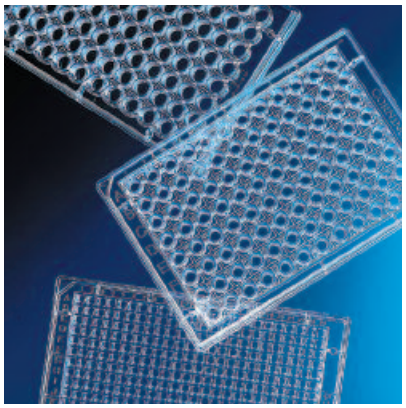
New Storage Mat Applicator System Meets Customers' Strict Storage Requirements

This 2-page application note describes the performance characteristics of the Corning Storage Mat Applicator and the Corning products with which it is compatible.

Recommendations for Heat Sealing Corning Polypropylene Storage Products Using the ABgene® Automated Laboratory Plate Sealer

This 3-page application note describes the critical parameters for sealing Corning microplates with the ABgene Automated Laboratory Plate Sealer.

Genomics



96 and 384 Well UV Microplates, page 79

Overview

FROM START TO FINISH – MEETING THE NEEDS OF THE GENOMICS LABORATORY

Corning's dedication to quality and technology has produced this comprehensive line of products for the genomics laboratory. Whatever aspect of research you are involved in – from culturing cells or microorganisms to printing and hybridizing DNA arrays, Corning's quality and breadth of line delivers reliable results. All of Corning's products are manufactured under stringent quality guidelines as an assurance of consistent performance from device to device and lot to lot. Featured in this brochure are our newest products for the high throughput genomics laboratory:

- Thermowell® Gold PCR reaction vessels for conventional and real-time PCR, and cycle sequencing
- 96 well half area UV plates for nucleic acid quantitation
- Low profile BioAssay dishes that are robotic friendly and maximize incubator and storage space

THE EQUIPMENT COMPATIBILITY PROGRAM

The increasing use of automated laboratory equipment demands laboratory disposables whose fit and function have been qualified. Our microplates are designed with automation compatibility in mind and they meet industry standards for plate dimensions. In addition, Corning Life Sciences maintains a comprehensive equipment compatibility program in which leading equipment manufacturers certify the compatibility of our products with their instruments. This information is continually updated with our new products as well as new instruments. For the most current information, visit our website: **www.corning.com/lifesciences**.

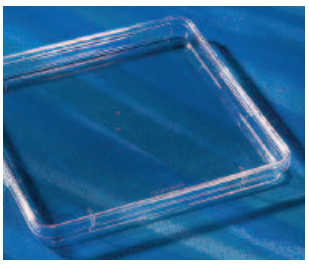
LIFE SCIENCES EARLY ACCESS TO DEVELOPMENT – THE L.E.A.D. PROGRAM

Corning is committed to meeting the rapidly evolving needs of the life sciences laboratory. We are continually developing innovative new products that are compatible with the latest advances in technology and instrumentation. Our L.E.A.D. program gives researchers access to these products and special pricing prior to their full market release. Contact your local Corning Life Sciences office or representative for more information about the products currently available through this program.

EXPERT ASSISTANCE IS JUST A TELEPHONE CALL OR E-MAIL AWAY

Customer service and technical representatives are available to answer any question – from pricing and product availability to protocols and applications advice. Our offices around the world are able to respond promptly to your inquiry regardless of your location. Contact us at your local office (listed on the back cover).

Colony Picking, Bacterial Growth, and Storage

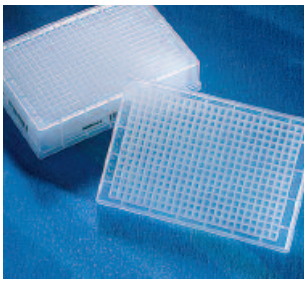


245 mm Square BioAssay Dish

245 mm Square BioAssay Dishes

Square bioassay dishes are made from polystyrene and are certified nonpyrogenic. They are packed with lids and are designed with a stacking bead so that they will stack securely without slipping. The dishes are compatible with automated colony picking instruments.

Cat. No.	Description	Automation Compatibility	Qty/Pk	Qty/Cs
431111	245 mm x 245 mm, Square, 18 mm Deep Nontreated Dish, Sterile	PBA Flexys™ and the Genetix "Q" Bot® automated colony picking and gridding robots	4	16
431272	245 mm x 245 mm, Square, 18 mm Deep Nontreated Dish, Sterile	AutoGen AutoGenesys, BioRobotics BioPick, BioGrid, TAS and MicroGrid II high volume automated colony picking systems	4	16
New 431301	245 mm x 245 mm, Low Profile, Sterile, Nontreated Dish	PBA Flexys, Genetix "Q" Bot, BioRobotics, BioPick	5	20



384 Well Polypropylene Blocks

96 and 384 Well Polypropylene Blocks for Growth and Storage

96 and 384 well deep well blocks feature well designs for optimal liquid handling and are certified DNase- and RNase-free.

Cat. No.	Description	Well Shape	Sterile	Well Volume	Qty/Pk	Qty/Cs
3956	96 Well	Round V	Yes	0.5 mL	10	50
3957	96 Well	Round V	No	0.5 mL	10	100
3958	96 Well	Round	Yes	1 mL	5	25
3959	96 Well	Round	No	1 mL	5	100
3960	96 Well	V-Bottom	Yes	2 mL	5	25
3961	96 Well	V-Bottom	No	2 mL	5	100
3964	384 Well	Square-Round	Yes	180 µL	5	25
3965	384 Well	Square-Round	No	180 µL	5	100
3342	384 Well	Square V	Yes	240 µL	5	50
3347	384 Well	Square V	No	240 µL	5	50

Disposable Plastic Erlenmeyer Flasks

Disposable Culture Flasks

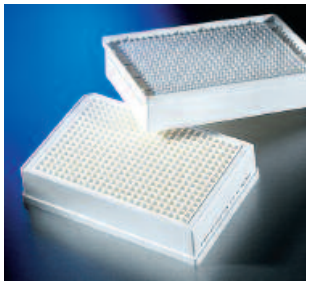
Disposable plastic Erlenmeyer flasks are made from optically clear polycarbonate and feature a wide, easy access mouth. The polycarbonate construction also delivers mechanical strength for shaker culture applications. Each flask is individually packaged and radiation sterilized. The polypropylene plug seal caps offer two positions: open to allow gas exchange or closed for a liquid-tight seal. The vent caps allow free gas exchange while offering a liquid-tight, contamination-free seal.

Cat. No.	Capacity (mL)	Graduations (mL)	Neck Diameter (mm)	Cap Style	Sterile	Qty/Pk	Qty/Cs
430421	125	25	26	Plug Seal	Y	1	50
431143	125	25	26	Vent Cap	Y	1	50
430183	250	25	31	Plug Seal	Y	1	50
431144	250	25	31	Vent Cap	Y	1	50
430422	500	50	43	Plug Seal	Y	1	25
431145	500	50	43	Vent Cap	Y	1	25
431146	1000	50	43	Plug Seal	Y	1	25
431147	1000	50	43	Vent Cap	Y	1	25

Purification

Filtr*EX*™ 96 and 384 Well Filter Plates

Corning® Filtr*EX* filter plates meet the industry standards for plate dimensions. The rigid side walls make the plate ideal for automation and the wide skirt accepts bar codes. Individual filter disks are encapsulated in the plate by a patented* process that ensures 100% integrity of each well. The design of the nozzle prevents sample cross-contamination and wicking. Glass fiber filter plates can be used for a variety of applications, such as plasmid isolation, DNA purification, PCR† clean-up or receptor/ligand binding assays. They are a cost-saving alternative to expensive DNA prep kits. Use the low-binding hydrophilic PVDF membrane for lysate clarification, protein kinase assays, or bead- or resin-based separation assays. Visit the Technical Information Center at our web site for additional application information.



384 Filtr*EX* Filter Plates

384 Well Filtr*EX* Filter Plates

Cat. No.	Membrane	Pigment	Sterile	Well Volume (µL)	Qty/Pk	Qty/Cs
3531	0.45 µm PVDF	White	No	180	5	25
3533	0.66 mm Glass Fiber	White	No	180	5	25

96 Filtr*EX* Filter Plates

96 Well Filtr*EX* Filter Plates

Cat. No.	Description	Sterile	Well Volume (µL)	Qty/Pk	Qty/Cs
3504	0.2 µm PVDF Membrane, Hydrophilic	No	350	10	50
3505	0.2 µm PVDF Membrane, Hydrophilic	Yes	350	10	50
3510	0.25 mm Glass Fiber Filter	No	350	10	50
3511	0.66 mm Glass Fiber Filter	No	350	10	50
New 3514	Fluid Guard for Filtr*EX* 96 Well Filter Plates	No	–	100	100

Please contact us for customized membranes.
*U.S. Patent No. 6,391,241
†PCR is covered by patents owned by Hoffman-LaRoche Inc., Nutley, NJ. Use of the PCR process requires a license.

Volume Adapter and Applicator

3584 Volume Adapter

A volume adapter allows larger volumes (up to 1 mL) to be applied to the 96 well filter plates. The applicator easily assembles and disassembles the filter plate and adapter, and ensures a perfect, leak-free fit.

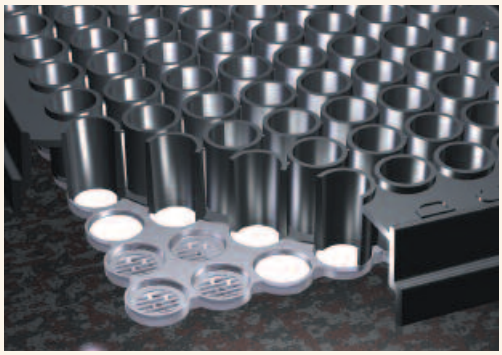
Cat. No.	Description	Qty/Pk	Qty/Cs
3584	Volume Adapter, Nonsterile	10	50
3507	Applicator	1	1

Collection Microplates

Filtr*EX* 96 and 384 well filter plates meet industry standards for plate dimensions and can be used with a broad range of collection plates. Polystyrene and polypropylene plates are available with a variety of well geometries. Commonly used collection plates are listed below. For information about other compatible collection plates, please contact us.

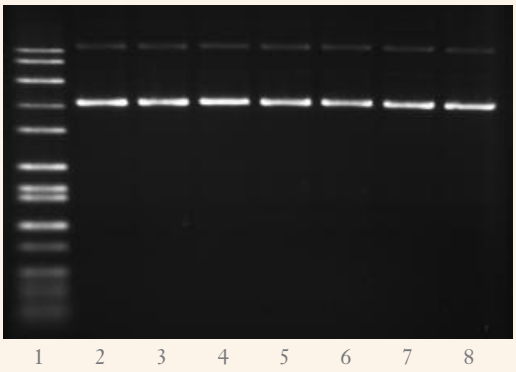
Cat. No.	Description	Well Volume (µL)	Qty/Pk	Qty/Cs
3371	96 Well, Round Bottom Polypropylene ClearPro™ Plate	360	25	100
3795	96 Well, Round Bottom Polystyrene Plate	360	25	100
3897	96 Well, V-Bottom Polystyrene Plate	320	25	100
3657	384 Well, Square Well, Round Bottom Polypropylene Plate	95	25	100
3965	384 Well, Square Well, Round Bottom Polypropylene Block	180	5	100
3702	384 Well, Flat Bottom Polystyrene Plate	125	25	100

Filtr*EX*™ 96 and 384 Well Filter Plate Construction

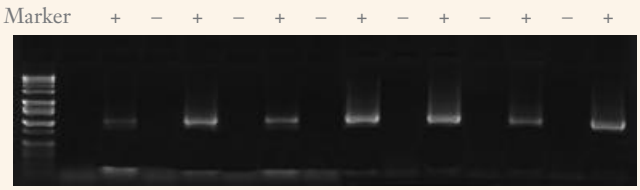


The proprietary nozzle design and individual, integrally-sealed filter disks prevent filtrate cross contamination and wicking. The rigid construction and wide skirt allow for robotic handling and bar coding.

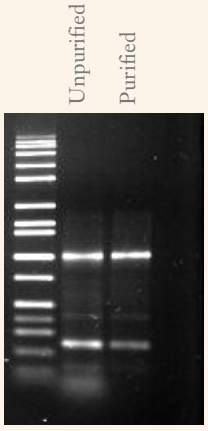
Filtr*EX* Filter Plate Performance



Agarose gel electrophoresis of Plasmid DNA prepared using Corning® Filtr*EX* 384 well filter plates.
Plasmid DNA samples isolated with glass fiber filter plates were separated in a 1% agarose gel in 1X TAE buffer. Lane 1 contains 10 µL of Hi-Lo™ markers (total DNA = 1 µg). Lanes 2-8 contain plasmid preparations isolated using 7 different wells of the filter plate. Plasmid DNA was recovered in approximately 55 µL total volume. Two microliters (2 µL) of recovered plasmid were loaded in each lane of the gel.



Integrally sealed wells eliminate sample cross contamination.
Alternating wells of negative control (–) or plasmid DNA (+) filtered through Filtr*EX* 384 well Filter Plates were analyzed for cross-contamination by PCR. PCR products were not detected in the negative control wells, indicating the absence of contaminating DNA.



PCR Clean-Up
PCR products were purified using a Filtr*EX* 384 well glass fiber filter plate. Primer dimers were efficiently removed with good recovery of the PCR products.


Spin-X Centrifuge Tube Filters

Spin-X® Centrifuge Tube Filters

Spin-X centrifuge tube filters consist of a membrane-containing filter unit within a centrifuge tube. They filter by centrifugation for bacteria removal, particle removal, HPLC sample preparation, removal of cells from media and DNA removal from agarose or acrylamide gels. Maximum RCF** is 16,000 x g.

Cat. No.	Membrane	Well Volume (working µL)	Pore Size (µm)	Tube Size (mL)	Qty/Cs
8160	CA	500	0.22	2.0	96
8161*	CA	500	0.22	2.0	100
8162	CA	500	0.45	2.0	96
8163*	CA	500	0.45	2.0	100
8169*	NY	500	0.22	2.0	200
8170*	NY	500	0.45	2.0	200

CA = Cellulose Acetate, NY = Nylon
*Indicates that the product is nonsterile and certified nonpyrogenic.
**RCF = Relative Centrifugal Force.

Spin-X Tube Purification of DNA from Agarose Gels

Introduction

Purification of DNA from an agarose gel with the Spin-X tube is quick and efficient, unlike the electroelution, dialysis, and "freeze-squeeze" methods. The Spin-X method consists of two simple steps: excision of the band from the gel and centrifugation in the Spin-X tube. Yields range from 30 to 80%.

Protocol*

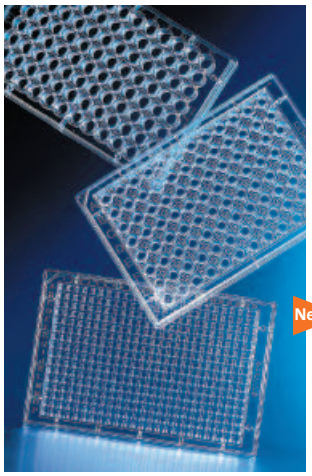
1. Electrophorese DNA in an agarose gel containing ethidium bromide.
2. After electrophoresis, illuminate the gel under long wavelength UV light, then, using a sharp instrument, carefully excise the band of interest (30-15,000 bp).
3. Place the gel slice into the filter cup of the Spin-X tube (Cat. No's. 8160, 8161, 8162, 8163) and mix with 100 to 200 µL of distilled water or Tris-EDTA.
4. Spin the tube at about 13,000 x g for 5 to 20 minutes at room temperature.
5. Collect the DNA from the microcentrifuge tube; the agarose gel will be retained on the Spin-X membrane. If needed, ethanol precipitate the DNA to remove any EDTA present.

Note: DNA yield may increase with the incorporation of one or all of the following steps:

1. Macerate the gel slice prior to placement in the Spin-X tube.
2. Prior to centrifugation in step #4, freeze the gel slice at -70°C in a separate tube, then allow to thaw.
3. After the initial centrifugation, add an additional 200 µL of buffer to the Spin-X tube and centrifuge again.
4. Spin for a longer period of time.

*Schwarz, Herbert and Whitton, J. Lindsay, 1992. A Rapid, Inexpensive Method for Eluting DNA from Agarose or Acrylamide Gel Slices Without Using Toxic or Chaotropic Materials. Vol. 13, No. 2, Biotechniques.

Quantitation and Detection



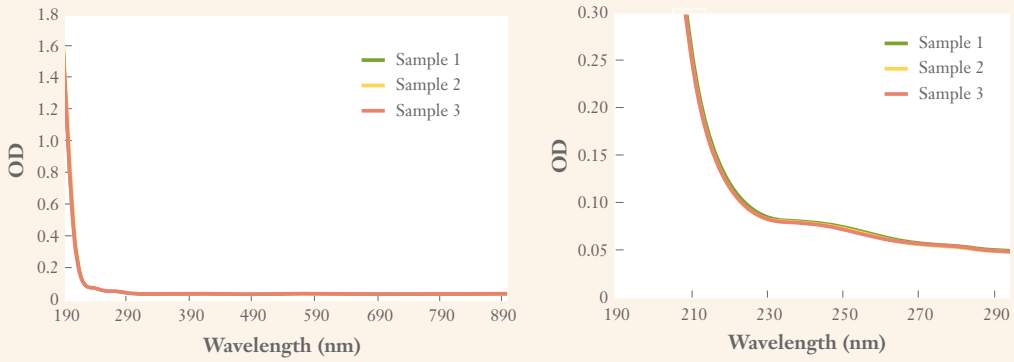
96 Well Half Area, 96 and 384 Well UV Microplates

96 and 384 Well UV Microplates

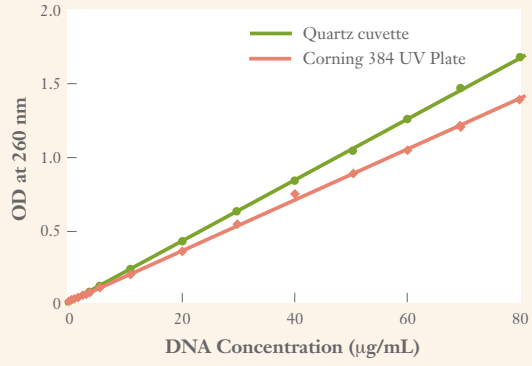
These plates have a unique UV-transparent bottom; ideal for determining protein and/or nucleic acid concentrations. The UV-transparent bottom is molded to the top without adhesives for greater strength and maximum leak resistance. Plates are certified for low background and consistent performance at 260 and 280 nm. Their broad linear detection range allows reliable detection of high and low concentrations of biomolecules.

Cat. No.	Format	Bottom	Well Volume (µL)	Qty/Pk	Qty/Cs
3635	96 Well	Flat	370	25	50
3675	384 Well	Flat	125	5	25
3679	96 Well Half Area	Flat	205	25	50

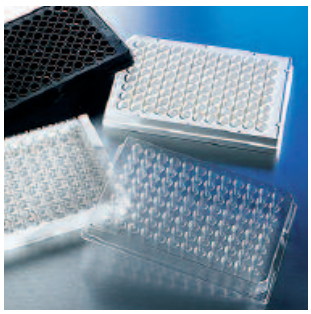
384 Well UV Microplate Performance



Background absorbance of three samples of the Corning® 384 well UV plate bottom material.
This material features consistently low absorbance over a broad wavelength range, including well into the UV. The three samples showed negligible background absorbance across the entire visible spectrum (left panel) and very low background in the UV range (right panel).



Comparison of DNA detection with the Corning 384 well UV plate to individual samples read in a quartz cuvette.
For each indicated DNA concentration, triplicate 100 µL samples were read in a quartz cuvette with a Beckman DU® spectrophotometer. Six samples (90 µL) were read in a Corning 384 well UV plate at each concentration with a Tecan ULTRA™ reader. These sample volumes were chosen in order to maintain a 1 cm path length (smaller volume samples can be read in the UV plate). The Corning UV plate demonstrates a broad linear range enabling the reliable detection of high and low concentrations as well as good sample to sample consistency (CV's of <2% at 50 µg/mL DNA).



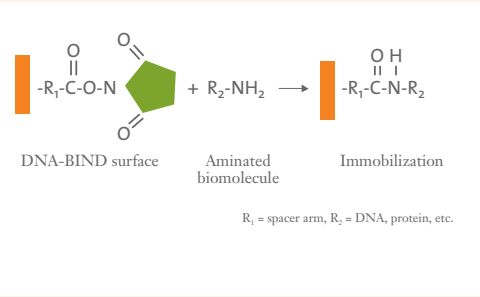
DNA-BIND Assay Microplates

DNA-BIND™ Assay Microplates

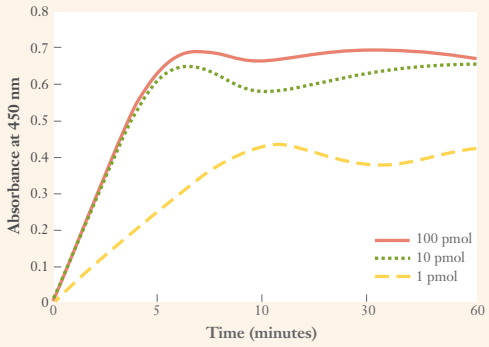
DNA-BIND surface covalently couples to amine groups, providing a convenient method to immobilize aminated single-stranded DNA by either the 5' or 3' end for hybridization, amplification, or other DNA-based assays. 96 well plates and 1 x 8 Stripwell™ plates come without lids. Protocols and application information are available on our web site: **www.corning.com/lifesciences**.

Cat. No.	Format	Well Shape	Qty/Pk	Qty/Cs
2497	1 x 8 Stripwell Plate, White	Flat	1	50
2505	96 Well Plate, Clear	Flat	1	50
2506	1 x 8 Stripwell Plate, Clear	Flat	1	50
2498	96 Well Plate, Black	Flat	1	50
2499	96 Well Plate, White	Flat	1	50
2525	96 Well Plate, Clear	Flat	1	10

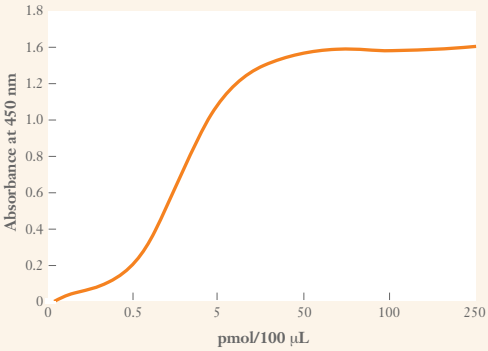
DNA-BIND Surface Performance



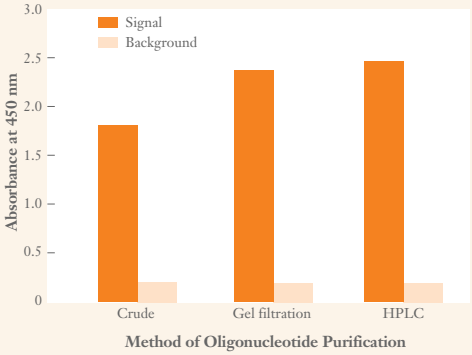
Reaction of N-oxysuccinimide with an aminated biomolecule



Kinetics of oligonucleotide coupling



Detection of hybridization at increasing oligonucleotide concentrations



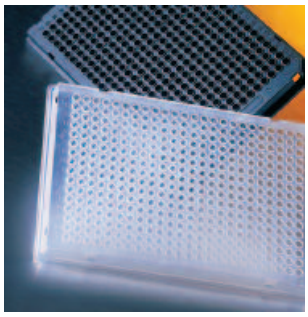
Effect of post-synthetic purification method on signal strength and background

DNA Amplification

Thermowell® GOLD PCR† Reaction Vessels from Corning

Thermowell GOLD PCR reaction vessels exemplify Corning's commitment to innovation: to develop superior quality, reliable, and versatile products to complement today's dynamic changes in technology. The wide variety of options offered by Thermowell GOLD provides researchers the choices necessary for complete compatibility with laboratory equipment. Look to Thermowell GOLD for PCR, sequencing, and real-time PCR.

Thermowell GOLD 384 Well Polypropylene PCR Microplates and Accessories



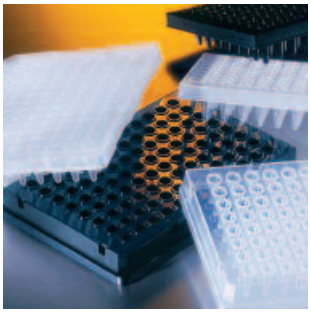
Thermowell GOLD 384 Well PCR Microplates

Thermowell GOLD 384 well PCR microplates feature exceptional dimensional stability following thermocycling, and are fully compatible with automation, commonly used thermal cyclers, and Applied Biosystems® sequencing adapters (see compatibility table).

Cat. No.	Description	Qty/Pk	Qty/Cs
3757	384 Well Polypropylene PCR Microplate, clear	10	50
3756	384 Well Polypropylene PCR Microplate, black	10	50
3699[a]	Silicone Rubber Sealing Mat – 384 Well Microplates	1	25
6569	Aluminum Sealing Tape-384 Well Microplates	100	100
6575	Universal Optical Sealing Tape	100	100

[a]Thermowell Sealing Mats, available for 384 Well PCR Plates, are easy to apply and remove, fully autoclavable and reusable (at least five times). These silicone rubber mats offer a cost effective alternative to other sealing methods and provide 100% sealing when used in conjunction with clamp or screw-down heated lid thermal cyclers.

Thermowell GOLD and Thermowell 96 Well Polypropylene PCR Microplates and Accessories



Thermowell GOLD 96 Well Polypropylene PCR Microplates

Thermowell GOLD 96 well PCR microplates are offered in five formats to ensure maximum flexibility and a perfect match for your applications. The original Thermowell 96 well PCR microplates are universal fit and can be cut into 3 x 8 well segments.

Cat. No.	Description	Qty/Pk	Qty/Cs
6551	96 Well Microplate, Clear – Thermowell	25	25
3752	96 Well Microplate, Full Skirt, Clear – Thermowell GOLD	10	50
3751	96 Well Microplate, Full Skirt, Black – Thermowell GOLD	10	50
3753	96 Well Microplate, Half Skirt, Clear – Thermowell GOLD	10	50
3755	96 Well Microplate, Half Skirt, Black – Thermowell GOLD	10	50
3754[b]	96 Well Microplate, Elevated Skirt, Clear – Thermowell GOLD	10	50

[b]Fully compatible with ABI 3700 and 3730.

Polycarbonate PCR Microplates

Cat. No.	Format	Model Name	Well Volume (µL)	Qty/Pk	Qty/Cs
6509	96 Well	Model P	200	1	25
6511	96 Well	Model M	200	1	25

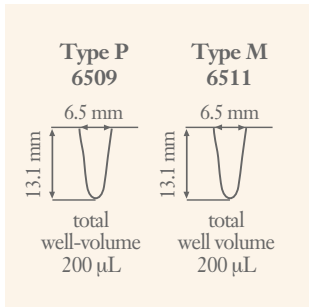


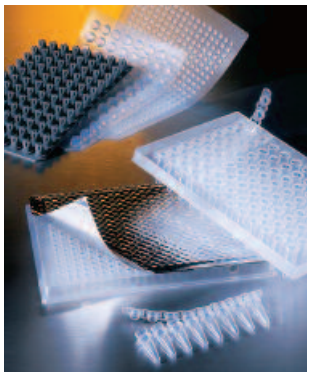
Plate Well Dimensions

Thermal Cycler Compatibility Guide for Polycarbonate PCR Microplates

Cat. No.	Name	Compatible Thermal Cyclers
6509	Model P	Applied Biosystems GeneAmp® PCR System 9600[c], Barnstead Thermolyne Amplitron II®, Techne® Cyclogene, and Gene E with 96 x 0.2 mL block
6511	Model M	MJ Research PTC-100-96V, PTC-200 DNA Engine™, Biometra Uno - Thermoblocker™, Coy Corporation Temp Cycler II, Corbett Research FTS-960, Hybaid OmniGene with Microblock, Quatro BioSystems T-C-40

[c]Requires the use of the Spacer Block and Frame (Cat. No. 6527).
†PCR is covered by patents owned by Hoffman-LaRoche Inc., Nutley, NJ. Use of the PCR process requires a license.

PCR Sealing Tape and Sealing Mats



Sealing Tape, Sealing Mats, and Cap Strips for PCR

Sealing tapes prevent evaporation and enable oil-free operation when used with thermal cyclers with heated lids. The universal optical sealing tape can be used in detection coupled with PCR systems (real-time PCR).

Cat. No.	Description	Qty/Pk	Qty/Cs
6569	Aluminum Sealing Tape-384 Well Microplates	100	100
6570	Aluminum Sealing Tape-96 Well Microplates	100	100
6575	Universal Optical Sealing Tape for Real Time PCR	100	100
6555	Thermowell™ Sealing Mat-96 Well Microplates	1	25
3699	Thermowell Sealing Mat-384 Well Microplates	1	25
3087	Silicone Rubber Septa Mat	10	50

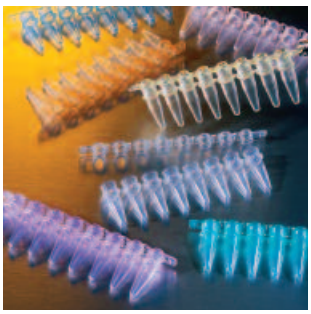
Thermowell® GOLD and Thermowell PCR Tubes

Thermowell GOLD PCR Tubes

Individual PCR tubes are made of thin wall polypropylene and designed for precise fit in heat blocks to optimize heat transfer. Tubes are tested and certified to be free of DNase and RNase, are autoclavable at 121°C and withstand centrifugation to 10,000 x g.

Cat. No.	Volume (mL)	Cap Style	Color	Qty/Pk	Qty/Cs
Individual Polypropylene PCR Tubes – Thermowell GOLD					
3745	0.2	Flat	Clear	500	1,000
3744	0.2	Flat	Assorted	500	1,000
3747	0.2	Dome	Clear	500	1,000
3746	0.2	Dome	Assorted	500	1,000
3750	0.5	Flat	Clear	500	1,000
3749	0.5	Flat	Assorted	500	1,000
Individual Polypropylene PCR Tubes – Thermowell					
6530	0.5	Flat	Clear	250	1,000
6531	0.2	Dome	Clear	96	960
6571	0.2	Flat	Clear	96	960

Thermowell GOLD and Thermowell 8 Well PCR Tube Strips



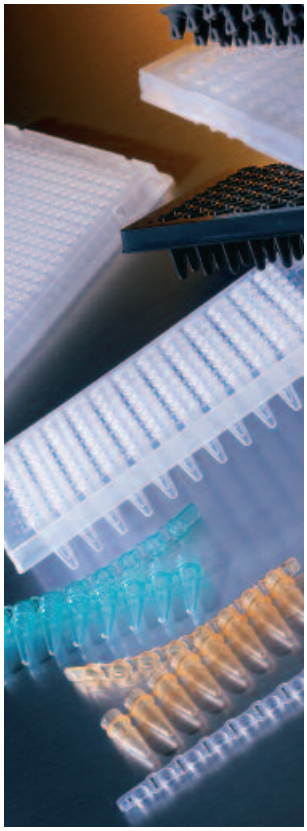
Thermowell GOLD 8 Well PCR Tube Strips

Tube strips consist of eight 0.2 mL thin wall polypropylene tubes connected together. Dual connectors between adjacent tubes eliminate inadvertent breakage during sample handling. Tube strips are designed for precise fit in thermal cyclers to optimize heat transfer. Thermowell GOLD cap strips are sold separately from Thermowell GOLD tube strips. Original Thermowell tube strips and cap strips are packaged together. Tube strips are tested and certified to be free of DNase/RNase contamination and are autoclavable at 121°C.

Cat. No.	Description	Qty/ Pk	Qty/ Cs
3741	0.2 mL 1 x 8 Tube Strips, Clear – Thermowell GOLD	125	1,250
3740	0.2 mL 1 x 8 Tube Strips, Assorted Colors - Thermowell GOLD	125	1,250
6542	0.2 mL 1 x 8 Tube Strips, Clear – Thermowell	60	300
6547*	0.2 mL 1 x 8 Tube Strips, Assorted – Thermowell	60*	300
3743	1 x 8 Cap Strips, Domed, Clear – Thermowell GOLD	125	1,250
3748	1 x 8 Cap Strips, Domed, Assorted Colors – Thermowell GOLD	125	1,250
3742	1 x 8 Optically Clear Flat Cap Strips, for RT-PCR** – Thermowell GOLD	125	1,250

*60 of each color per bag; 1 bag of each color per case.
**Optically Clear Flat Cap Strips are designed for real-time PCR. Suitable for use with Thermowell GOLD 0.2 mL 1 x 8 PCR tube strips and 96 well microplates.

See page 83 for Compatibility Guide and Volume Reference table.



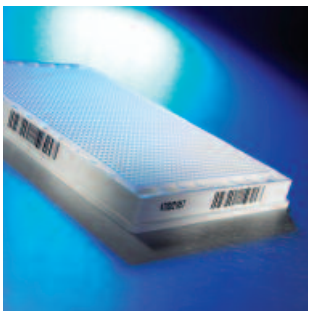
Compatibility Guide for Thermocyclers, Sequencers, and Real Time PCR

		Thermowell® GOLD Microplates		
		 96 Well Half Skirt	 96 Well Full Skirt	 384 Well
Thermal Cyclers				
Applied BioSystems®	GeneAmp® 9600	■		
	GeneAmp 9700	■		■
Biometra®	Uno®	■	■	
	Uno II®	■		■
	T1 Thermocycler®	■	■	■
	Tgradient®	■	■	
	Trobot®	■	■	■
Bio-Rad®	iCycler™	■		■
Eppendorf	MasterCycler®	■	■	
Ericomp	SingleBlock®	■		
	TwinBlock®	■		
	Deltacycler I®	■		
Flexi	Gene		■	■
	Genius		■	
ThermoHybaid	PCR Sprint®		■	
	PCR Express®	■	■	■
	MultiBlock System	■	■	■
	Touchdown®	■	■	■
	Omnigene®	■	■	
	Omn-E®	■	■	
MJ Research™	PTC 200 DNA Engine™	■	■	■
	PTC 225 DNA Tetrad®	■	■	■
	PTC 100®	■	■	
MWG™	Primus 96®	■	■	
	Primus 384®			■
Stratagene®	Robocycler®		■	■
TaKaRa	TP 240®		■	
	TP 3000®	■	■	
Techne®	Touchgene X®	■	■	■
RT-PCR Thermal Cyclers				
Applied BioSystems	ABI PRISM® 7000	■		■
	ABI PRISM 7700	■	■	■
	ABI PRISM 7900 HT	■		■
Bio-Rad	iCycler®		■	
Stratagene®	Mx 4000®		■	
Sequencers				
Applied BioSystems	ABI PRISM 3100	■		■
	ABI PRISM 3700	■		■
	ABI PRISM 3730	■		■
Amersham Biosciences	MegaBACE™ 500		■	
	MegaBACE 1000 Mark II		■	
	MegaBACE 4000			■
MJ Research™	BaseStation®		■	
	Transgenomic		■	

Thermowell® GOLD PCR Microplates Volume Reference Table

Format	Total Volume	Working Volume
384 Well PCR Microplates	55 µL	50 µL
96 Well PCR Microplates, Full Skirt	240 µL	200 µL
96 Well PCR Microplates, Half Skirt	340 µL	300 µL
96 Well PCR Microplates, Elevated Skirt	340 µL	300 µL

Bar Code Customization



Dependable Durability

Bar codes have been quality tested for optimal readability, chemical resistance and temperature variation.

What is a Bar Code*?

The same kind of bar codes you see in stores and supermarkets can be very useful to your lab. Consisting of a series of black bars and light spaces representing letters and/or numerals, a bar code is an easy-to-use vehicle for data collection. The specific arrangement of these bars and spaces follows strict rules known as a "symbology."

How Does a Bar Code Work?

Bar codes reflect spots of light into a scanner in varying amounts. These differences in reflection are translated into electrical signals by a light detector inside the scanner. The signals are converted into binary ones and zeros, which are used in various combinations to stand for specific numbers and letters.

Common Characteristics of a Bar Code

The Quiet Zones

The areas immediately adjacent to the beginning and the end of the bar code symbol. These zones define the parameters of the code. As a rule of thumb, zones should be 0.25" or larger to prevent misreads.

Start and Stop Characters

Found at the beginning and end of the bar code symbol. They tell the scanner from which direction information is being received.

Interpretation Line

Appears above or beneath a bar code where human readable information appears.

Corning, Beyond the Common Bar Code

- 2.75" x 0.25" label size
- Linear (1-D) bar codes: Code 128, Code 3 of 9, Interleaved 2 of 5
- 10 Mil Narrow Bar Element (X-dimension = 0.010")
- Multiple bar code labels on a single plate
- Label placement on any side of a Corning microplate
- Customer sequence is electronically stored and can be maintained even if plates or projects change.

Custom Designed Bar Codes

Corning will assist in designing and implementing a bar code label to meet your exact specifications. We will provide bar code label test samples at the front end of a project, to confirm decodability and ensure flawless performance in your end-use process. Our other customization features include:

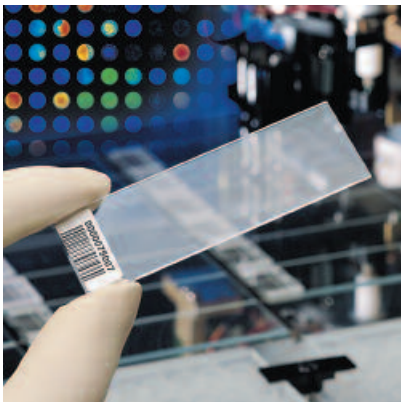
- Flexible bar code and corresponding human readable layout/orientation on the bar code label, for compatibility with the internal bar code scanner inside your automated instruments
- Color coding
- Superior print quality and resolution
- Flexible bar code label positioning
- Resistant to most commonly used organic solvents

Expert Advice

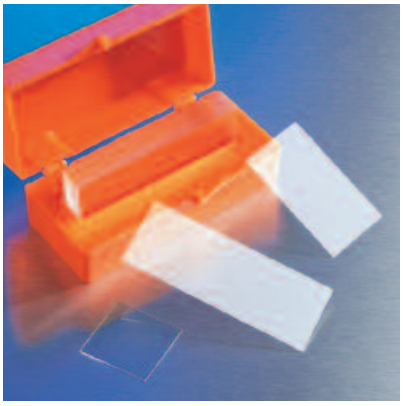
Most Corning genomics products are suitable for bar code customization. Contact Corning Life Sciences or your local representative for more information.

*Information provided by Computype, Inc.

Microarray



UltraGAPS Coated Slides, page 89



Corning Cover Glass, page 92

Overview

The quality and reliability of microarray results largely depend on the quality and consistency of both the glass substrate and the reagents used to manufacture and process the arrays. Corning has a history rich in science and technology, with expertise in glass and surface modification, optics, biochemistry and molecular biology, which has led to many innovations for life science research. Using this broad-based knowledge, Corning provides complete solutions to customers' complex problems and enables the achievement of breakthrough discoveries.

TOOLS FOR EVERY STEP IN THE PROCESS

- Premium glass substrates for printing microarrays
- Optimized reagents for the highest possible performance and control throughout the microarray process
- Storage products to facilitate the process and preserve sample content

SUPERIOR TECHNICAL AND APPLICATIONS INFORMATION

- Protocols included with every case of product, optimized from Corning's vast research experience
- Expert assistance that is just an e-mail or phone call away
- Field Applications support with a direct link to our Applications Group

UNPARALLELED MANUFACTURING PROCESSES

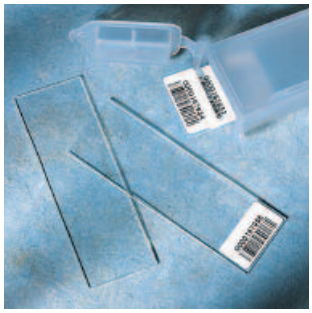
Corning® glass slides are manufactured using a proprietary coating process in a Class 100 cleanroom and undergo numerous quality control tests. Every slide is meticulously inspected for the presence of contaminating particulates, scratches and other defects before and after coating, ensuring a substrate of unmatched cleanliness, consistency, reliability and integrity.

The reagents in the Pronto!™ Microarray Kits are quality controlled to deliver consistency at every step in the process. They are optimized for use with Corning microarray slides, allowing the highest possible level of performance, standardization, and control.

Slide Selection Chart

Slide	Attachment Chemistry	Probe Types	Recommended Spotting Media	Applications
Epoxide	Covalent, Epoxysilane	Oligonucleotides	150 mM sodium phosphate, pH 8.5, 0.005% SDS	◗ Transcriptional profiling ◗ SNP analysis
UltraGAPS™	Ionic, aminosilane	Double-stranded DNA	Pronto!™ Universal Spotting Solution 30 to 50% DMSO 3xSSC 150 mM sodium phosphate, pH 7.5	◗ Transcriptional profiling ◗ Array CGH ◗ ChIP on Chip
GAPS™ II	Ionic, aminosilane	Proteins	20% Glycerol in PBS (ligand dependent)	◗ Antibody screening ◗ Functional assays

Microarray Printing



Epoxide Coated Slides

Corning® Epoxide Coated Slides provide the optimal, uniform surface chemistry for covalent attachment of **unmodified or amino-modifed short oligonucleotides** (~30-mer), as well as long oligonucleotides (>50-mer) and cDNA. Use Corning Epoxide Coated Slides with the Pronto! Universal Hybridization Kit (see page 94) to achieve the highest possible level of overall microarray performance.

Versatility
- Ideal for short oligonucleotides, long oligonucleotides, and cDNA
- Print with unmodified or amino-modified oligonucleotides
- No UV crosslinking or baking step required for DNA coupling

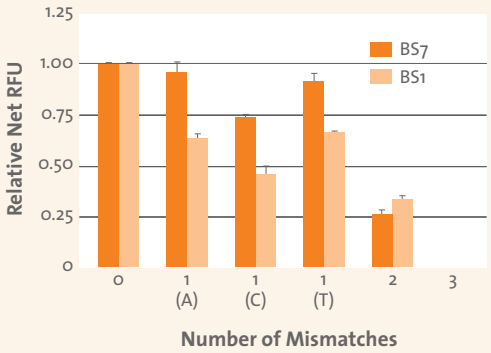
Reproducibility
- Minimal contribution to interarray variability (less than 3% CV)

Sensitivity
- Detect 1 pg RNA spiked into 4 µg of total RNA sample

Specificity
- Differentiate between 90% homologous oligos (3 mismatches in 30-mer oligonucleotides)

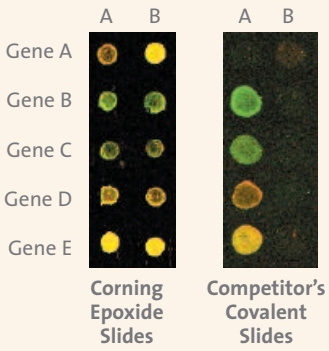
Epoxide Coated Slides Ordering Information

Cat. No.	Description	Slides/Pk	Slides/Cs
40040	Epoxide Slide Starter Kit (10 Epoxide Coated Slides, 0.8 mL Short Oligo and 0.8 mL cDNA/Long Oligo Hybridization Solution	5	10
40041	Epoxide Coated Slides with Bar Code	5	25
40042	Epoxide Coated Slides without Bar Code	5	25
40043	Epoxide Coated Slides with Bar Code, Bulk Pack	25	25
40044	Epoxide Coated Slides without Bar Code, Bulk Pack	25	25



Differentiate Between 90% Homologous Oligonucleotides

Corning Epoxide Coated Slides and the reagents from Pronto! Universal Hybridization Kits perform together to differentiate between 90% homologous oligonucleotides (3 mismatches in 30-mer oligonucleotides). A study using mismatch oligonucleotides designed for two *B. subtilis* genes (BS7 and BS1) was performed. No mismatches (0), 1 mismatch (A, C, T) or multiple mismatches (2, 3) were tested for specificity of detection under identical processing conditions. As indicated in the above graph, there is a reduction in signal for each successive mismatch until no detectable signal is observed for 3 mismatches.



Use Unmodified or Amino-Modified Oligonucleotides

Oligonucleotides (30-mer) were printed onto Corning Epoxide Coated Slides and a competitor's covalent slides, following recommended protocols. Oligonucelotides were either C6-amino modified at the 5' end (A columns) or unmodified (B columns). Cy®5/Cy®3 ratios correlated strongly between modified and unmodified oligonucleotides for Corning Epoxide Slides, but the competitor's slides showed an absolute requirement for amino modification of the oligonucelotides.

UltraGAPS™ Coated Slides

The Gamma Amino Propyl Silane surface on UltraGAPS Coated Slides is ideal for printing long (>50-mer) oligonucleotides, as well as cDNA. UltraGAPS Coated Slides have a more hydrophobic surface than competitors' slides, resulting in smaller, more consistent spot size. Each lot is tested for consistent spot morphology, signal intensity, and low background in a hybridization assay. Some of the applications for which UltraGAPS Coated Slides are ideally suited include: gene expression analysis, genotyping, and CGH (comparative genomic hybridization).

The Pronto!™ Universal Spotting Solution (see page 91) has been optimized for use with the UltraGAPS Coated Slides and provides excellent spot morphology for microarray printing. Use the Pronto! Universal Hybridization Kit (see page 94) in conjunction with these slides to achieve the highest level of microarray performance.

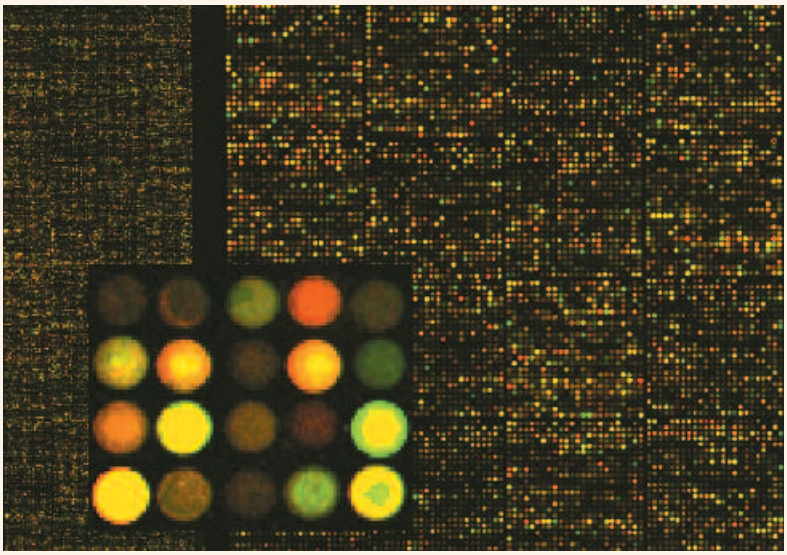
Reproducibility
- Minimal contribution to interarray variability (less than 5% CV)

Dynamic Range
- Low background autofluorescence

Manufacturing Excellence
- Consistent spot morphology
- Uniform surface treatment
- Higher hydrophobicity

UltraGAPS Coated Slides Ordering Information

Cat. No.	Description	Slides/Pk	Slides/Cs
40015	UltraGAPS Coated Slides with Bar Code	5	25
40016	UltraGAPS Coated Slides without Bar Code	5	25
40017	UltraGAPS Coated Slides with Bar Code, Bulk Pack	25	25
40018	UltraGAPS Coated Slides without Bar Code, Bulk Pack	25	25
40019	UltraGAPS Slide Starter Kit (Includes 10 UltraGAPS Coated Slides, 5 mL Universal Spotting Solution)	5	10
40024	Pronto! Universal Validation Kit (Includes 10 UltraGAPS Coated Slides, 15 mL Universal Spotting Solution, Pronto! Hybridization Kit for 10 arrays)	5	10
40025	Pronto! Universal Printing Kit (Includes 25 UltraGAPS Coated Slides, 50 mL Universal Spotting Solution)	25	25



27,000 Feature Array on UltraGAPS Coated Slides (three magnifications)

A 27,000 feature array was printed on UltraGAPS slides, processed and hybridized using the reagents in the Pronto! Universal Hybridization Kit. The inset shows a magnification to highlight the low background, uniform spot morphology, and signal intensity of a the array.

Data courtesy of A. Borg, Ph.D., Lund University, Sweden.

GAPS™ II Coated Slides

GAPS II Coated Slides are manufactured from a proprietary ultraflat glass that enhances microarray performance, enabling more accurate reading of microarrays by confocal laser scanners. GAPS II Coated Slides are manufactured using the same coating process and attachment chemistry as the original GAPS amino-silane coated slides, enabling researchers to use the same protocols that they optimized for GAPS slides. Use GAPS II Coated Slides with the Pronto!™ Universal Hybridization Kit (see page 94) to achieve maximum microarray performance.

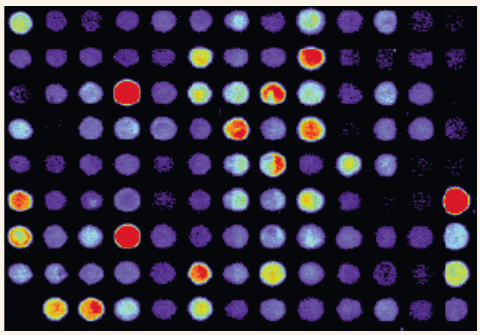
Flexibility ◗ Recommended for both DNA and protein arrays

Binding Capacity ◗ High DNA retention for maximum signal strength

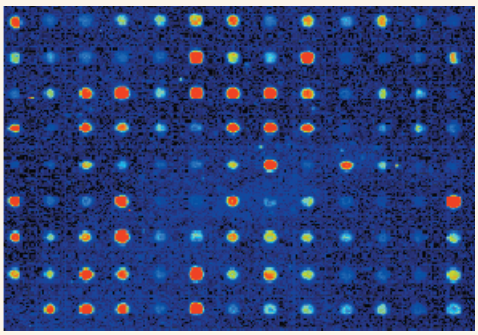
Dynamic Range ◗ Low background autofluorescence

GAPS II Coated Slides Ordering Information

Cat. No.	Description	Slides/Pk	Slides/Cs
40003	GAPS II Coated Slides with Bar Code	5	25
40004	GAPS II Coated Slides without Bar Code	5	25
40005	GAPS II Coated Slides with Bar Code, Bulk Pack	25	25
40006	GAPS II Coated Slides without Bar Code, Bulk Pack	25	25



GAPS II Coated Slide

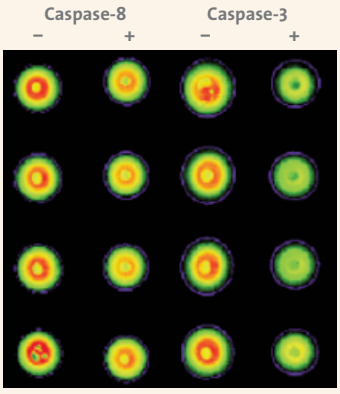


Ordinary Silane Coated Slide

Spot Morphology on GAPS II Coated Slides

Note uniform spot morphology, high signal strength, and ultra-low background with the GAPS II Coated Slide.

Images courtesy of Dr. John Quackenbush of the Institute for Genomic Research (TIGR), Rockville, MD.



Functional Peptide Array on GAPS II Coated Slides

The Caspase-3 substrate NH_2-DEVDA-Biotin was suspended in Corning® Epoxide Spotting Solution and printed in quadruplicate onto anhydride-derivitized GAPS II Coated Slides. Peptide arrays were incubated with avidin-Cy®3 in the absence or presence of Caspase-8 or Caspase-3 (as indicated), and scanned at 532 nm. The printed DEVDA peptide retained function on the array, as indicated by the reduced fluorescence seen in the spots treated with Caspase-3, but not Caspase-8. Note: GAPS II Coated Slides have also been used successfully for protein arraying without derivatization.

Data generated by Corning R&D.

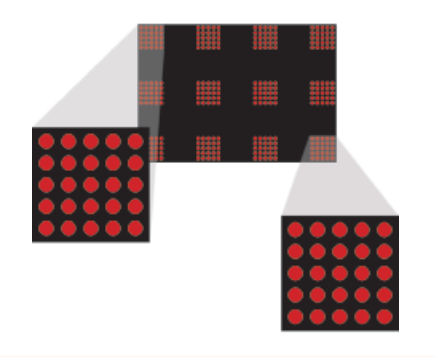
Pronto!™ Universal Spotting Solution

Pronto! Universal Spotting Solution is optimized for both long oligonucleotides (>50-mer) and cDNA printed on UltraGAPS™ Coated Slides. The proprietary formulation provides excellent spot morphology and has an extremely low evaporation rate. Pronto! Universal Spotting Solution is available in bulk as well as part of both the UltraGAPS Slide Starter Kit and Pronto! Universal Printing Kit.

- Low background autofluorescence
- Low evaporation rate
- Ensures consistent DNA printing concentration
- Eliminates need for volume adjustments
- Provides for even distribution of spotted DNA across entire array

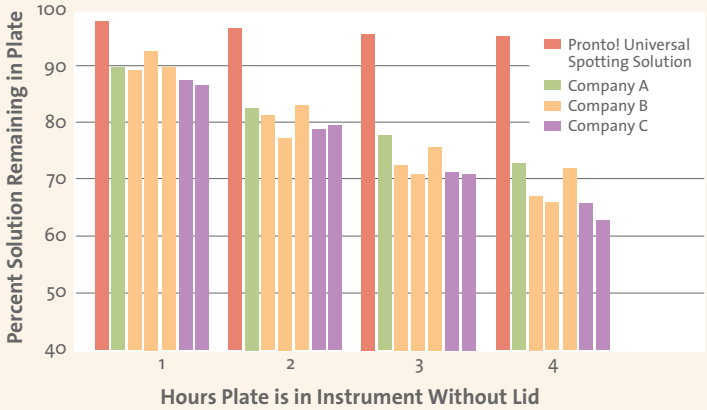
Pronto! Universal Spotting Solution Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
40027	Pronto! Universal Spotting Solution, 250 mL	1	1
Cat. No.	**Description**	**Slides/Pk**	**Slides/Cs**
40019	UltraGAPS Slide Starter Kit (Includes 10 UltraGAPS Coated Slides, 5 mL Universal Spotting Solution)	5	10
40025	Pronto! Universal Printing Kit (Includes 25 UltraGAPS Coated Slides and 50 mL Universal Spotting Solution)	25	25



Pronto! Universal Spotting Solution – Spot Uniformity

Quality control testing for Pronto! Universal Spotting Solution requires consistent spots when using 12 pins printed 25 times.



Pronto! Universal Spotting Solution – Low Evaporation

Pronto! Universal Spotting Solution evaporative losses are <5% over 4 hours, as compared to evapo-rate losses of >25% with other commercial spotting solutions.

Pronto!™ Epoxide Spotting Solution

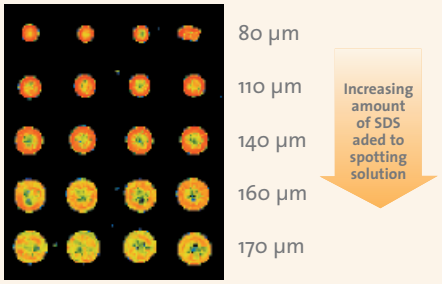
Pronto! Epoxide Spotting Solution should be used for printing all types of DNA, including short oligonucleotides (~30-mer), long oligonucleotides (>50-mer), and cDNA printed on Corning® Epoxide Coated Slides. When used with Corning Epoxide Coated Slides, this spotting solution provides spot size control for printing high density arrays without contributing to background fluorescence. Pronto! Epoxide Spotting Solution is available in bulk (250 mL) or as part of the Corning Epoxide Slide Starter Kit.

- Provides controlled spot size for high density arrays
- No significant contribution to background fluorescence of arrays
- Low evaporation rate
- Enhanced spot morphology

Pronto! Epoxide Spotting Solution Ordering Information

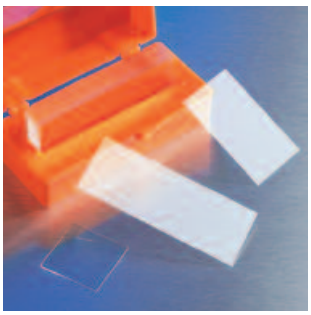
Cat. No.	Description	Qty/Pk	Qty/Cs
40047	Pronto! Epoxide Spotting Solution, 250 mL	1	1

Cat. No.	Description	Slides/Pk	Slides/Cs
40040	Epoxide Slide Starter Kit (10 Corning Epoxide Coated Slides 5 mL Pronto! Epoxide Spotting Solution, 0.8 mL Short Oligo Hybridization Solution)	5	10



Varying Spotting Solution Formulations to Adjust Spot Size

Pronto! Epoxide Spotting Solution formulation can be adjusted to alter spot size at will. DNAs were dissolved in Pronto! Epoxide Spotting Solution to which varying amounts of sodium dodecyl sulfate (SDS) had been added, and were printed in quadruplicate onto Epoxide Coated slides using 120 µm solid pins. the top row (80 µm feature diameter) had no addition, whereas adding increasing amounts of SDS resulted in correspondingly larger feature diameters.



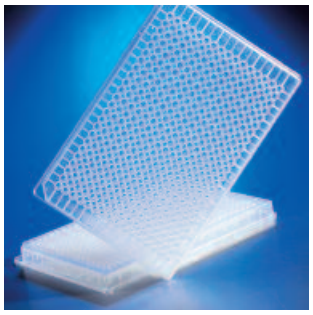
Corning® Cover Glass

Corning Cover Glass is manufactured from special, optically clear glass. The cover glass is resistant to surface attack or weathering and will remain clear for extended periods of time. The flatness is controlled by a machine process resulting in a trouble-free fit to slides for a wettable and bubble-free mount.

The thickness of No. 1½ cover glass is 0.16 to 0.19 mm. Cover glass is packaged in plastic boxes for protection and convenience. Cover glasses in sizes and thicknesses other than those listed are available.

Cover Glass Ordering Information

Cat. No.	Description	Approx. Pcs/Oz	Qty/Cs
2870-22	Corning Cover Glass, Square, 22 x 22 mm, No. 1 1/2	135	10 oz
2940-223	Corning Cover Glass, Rectangular, 22 x 30 mm, No. 1 1/2	97	10 oz
2940-224	Corning Cover Glass, Rectangular, 22 x 40 mm, No. 1 1/2	73	10 oz
2940-225	Corning Cover Glass, Rectangular, 22 x 50 mm, No. 1 1/2	58	10 oz
2940-243	Corning Cover Glass, Rectangular, 24 x 30 mm, No. 1 1/2	89	10 oz
2940-244	Corning Cover Glass, Rectangular, 24 x 40 mm, No. 1 1/2	67	10 oz
2940-245	Corning Cover Glass, Rectangular, 24 x 50 mm, No. 1 1/2	54	10 oz
2940-246	Corning Cover Glass, Rectangular, 24 x 60 mm, No. 1 1/2	45	10 oz



384 Well Microarray Printing Plates

Corning® 384 well polypropylene microplates are available in both low and full volume well formats to meet source plate requirements for printing DNA content onto microarray slides. The plates are manufactured from solvent resistant, virgin polypropylene that is compatible with many organic solvents including DMSO. The plates feature rigid, full length skirts for full compatibility with automation.

The 384 Well Low Volume Microarray Printing Plate (Cat. No. 3672), with a working volume of 2 to 20 µL, has a conical V-bottom, square well geometry that provides for maximum sample recovery. The 384 Well Full Volume Storage Plate (Cat. No. 3656) has a total well volume of 95 µL.

- Well design provides for maximum sample recovery
- Resistant to many organic solvents including DMSO
- Certified DNase- and RNase-free
- Automation compatible

384 Well Microarray Printing Plates Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
3672	384 Well Microarray Printing Plate, Polypropylene, Low Volume	10	50
3656	384 Well Storage Plate, Polypropylene, Full Volume	25	100
6569	Aluminum Sealing Tape for 384 Well Microplates	100	100
3099	Universal Lid for 384 Well Microplates	25	50
3085	DMSO Resistant Lid for 384 Well Microplates	25	50

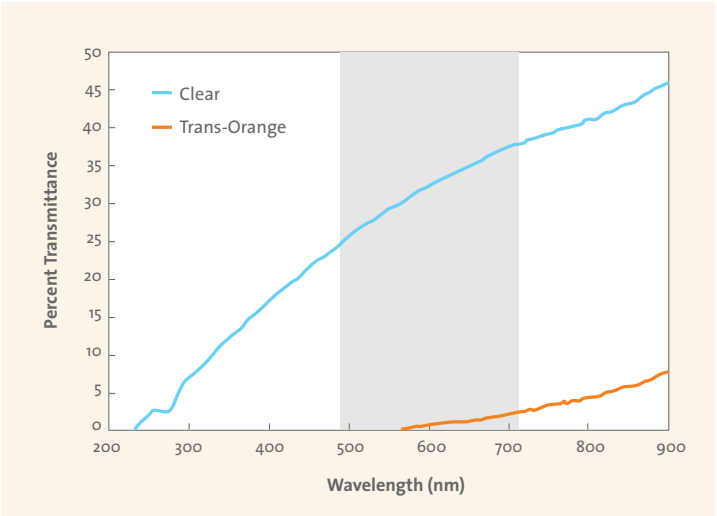
Microarray Slide Mailers/Storage Boxes

The plastic containers in which UltraGAPS™ Coated Slides are shipped also function as storage boxes for printed arrays. These containers are available as either 5 slide mailers or 25 slide storage boxes. The trans-orange plastic has low transmittance in the 500 to 700 nm wavelength range which helps protect Cy®3 and Cy®5 dyes from photobleaching. These rigid plastic containers do not shed particles or outgas volatile chemicals that may contaminate microarray slides.

The Corning® 25 Slide Storage Box has a lift off lid which is easy to open and close. The 5 Slide Mailer has a hinged lid that snaps closed tightly to prevent slides from accidentally falling out.

Microarray Slide Mailers/Storage Boxes Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
40082	5 Slide Mailer for Microarrays	50	50
40081	25 Slide Storage Box for Microarrays	10	20



Transmittance Through Corning Trans-Orange Slide Mailers
Low transmittance (500-700 nm) helps protect Cy3 and Cy5 from photobleaching.

Microarray Storage Pouches

Corning® Microarray Storage Pouches for 5- and 25-slide holders are the same pouches in which Corning UltraGAPS™ and Epoxide Coated Slides are shipped. These tear-resistant, foil-laminated pouches can be used to store and ship microarrays.

When heat-sealed, the pouches protect microarrays from light, humidity, and environmental contaminants. Each pouch comes affixed with a 3" x 4" white marking label.

Microarray Storage Pouches Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
40085	5 Slide Storage Pouch	50	50
40086	25 Slide Storage Pouch	50	50

Microarray Processing

Pronto!™ Universal Hybridization Kits

Pronto! Universal Hybridization Kits (Cat. Nos. 40026 and 40028) provide all of the reagents necessary to perform hybridizations of fluorescently labeled cDNA to microarrays printed on Corning Epoxide, UltraGAPS, or GAPS™ II Coated Slides. The Pronto! Universal Validation Kit (Cat. No. 40024) contains all of the reagents from above as well as 10 UltraGAPS Coated Slides and 15 mL of Universal Spotting Solution.

Pre-Soak Solution
- Remove existing autofluorescence from printed microarrays

Pre-Hybridization Solution
- Block background fluorescence during array hybridization

Hybridization Solutions
- Solutions compatible with cDNA, long oligonucleotide, and short oligonucleotide content
- Ready to use (no dilution required)
- Contain blockers to increase specificity

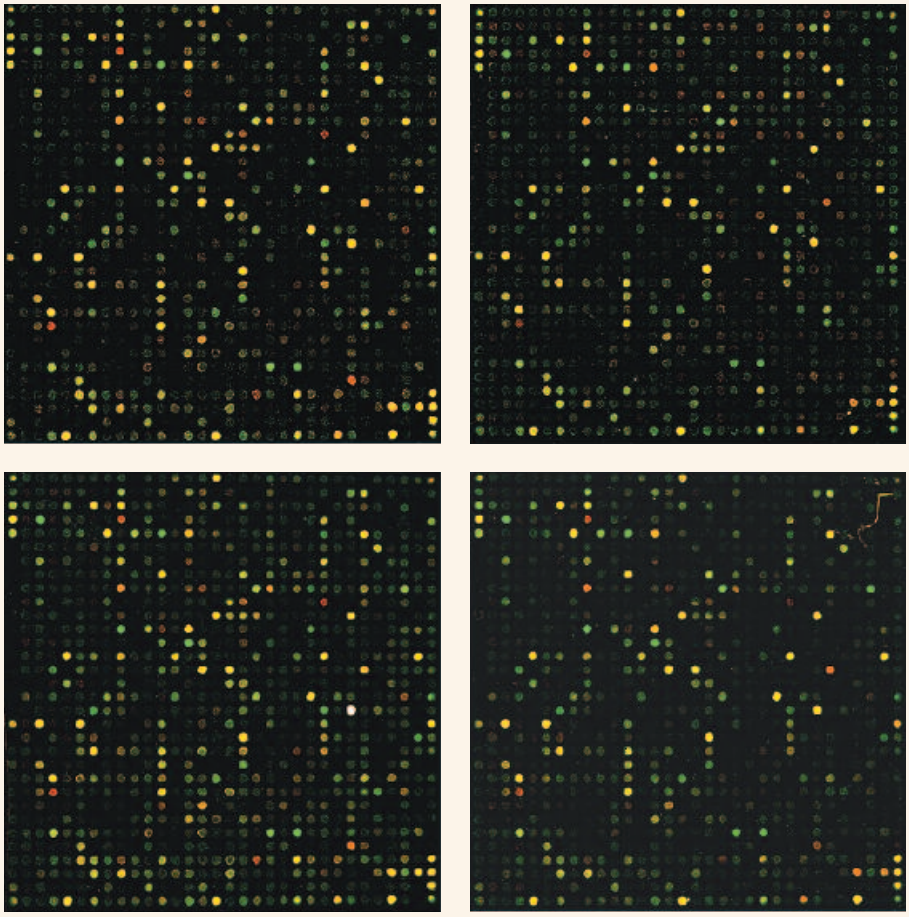
Wash Solutions
- Quality tested to ensure manufacturing consistency

Pronto! Universal Hybridization Kit Ordering Information

Cat No.	Product	Reactions
40024	Pronto! Universal Validation Kit (Includes 10 UltraGAPS Coated Slides, 15 mL Universal Spotting Solution)	10
40028	Pronto! Universal Hybridization Kit	10
40026	Pronto! Universal Hybridization Kit	25
40030*	Pronto! Hybridization Kit without Pre-soak	25
40090	Pronto! cDNA Long Oligo Hybridization Solution, 20 mL	
40048	Pronto! Short Oligo Hybridization Solution, 4 mL	

*Larger volumes of reagents specially designed for use in automated hybridization stations.

A



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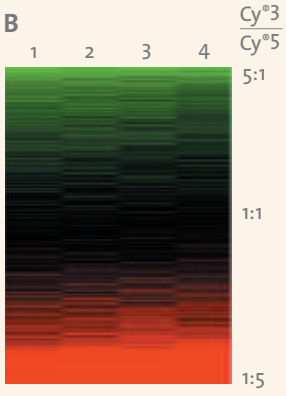

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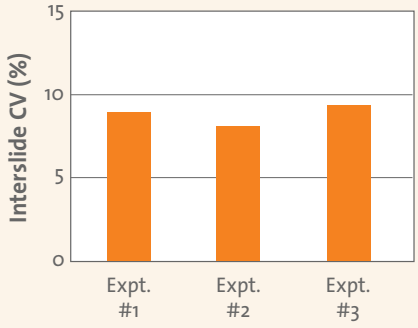


Superior Reproducibility

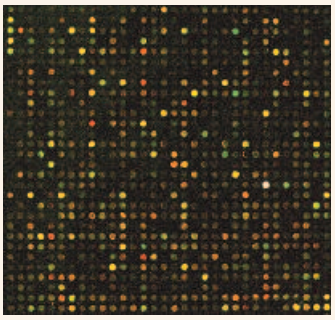
Four separate 4K arrays were processed using the Pronto!™ Universal Hybridization Kit to demonstrate reproducibility (A). Differential gene expression patterns as represented by ratios of normalized Cy®3/Cy®5 in the cluster diagram were found to be very consistent between the four arrays (B). Interslide CVs were shown to be <10% for each of 3 separate experiments performed (C).

Pronto!™ Background Reduction Kit

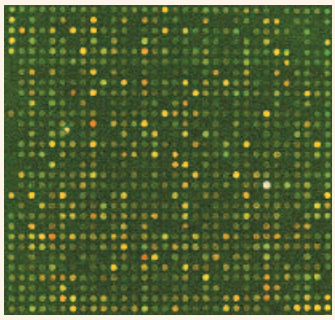
The Pronto! Background Reduction Kit is designed to eliminate background autofluorescence and prepare printed arrays for hybridization. It also can be used as the final step in the array fabrication process. The strong reducing effect of this treatment leads to increased sensitivity and specificity by removing autofluorescent background due to oxidation. The kit includes liquid sodium borohydrate and 1L of Pre-Soak Solution which provides enough reagents for the treatment of at least 50 arrays.

Pronto! Background Reduction Kit Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
40029	Pronto! Background Reduction Kit	1	1



With Presoak



Without Presoak

	With Presoak	Without Presoak
Background cutoff (RFU)	100.6	183.3
Number of features ≥ 2X background	1221	891

Detect Low Expressing Genes

Use of the Pronto! Background Reduction Kit results in the increased detection of low expressing genes (see table). Reduction of background autofluorescence is evident when 4K human arrays were processed using the presoak reagents in the Pronto! Background Reduction Kit. Arrays that were processed with the presoak reagents (left image) had a lower background detection cutoff than those processed without presoak (right image).

Hybridization Chambers

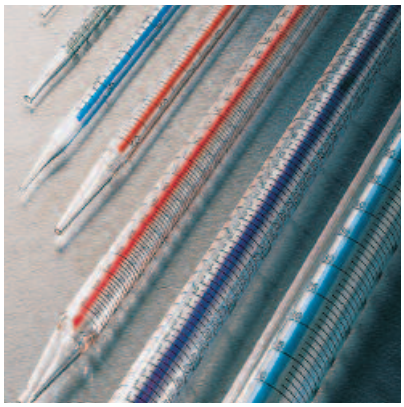
Corning® Hybridization Chambers are designed to hold microarray slides (25 x 75 mm) at constant humidity during hybridization incubations. The O-ring and retaining clips ensure that the reusable chambers remain watertight when submerged in waterbaths and airtight in hybridization ovens. Wells in the base hold 10 to 15 µL of water to maintain optimal interior humidity.

The original Corning Hybridization Chamber (Cat. No. 2551) provides the ideal interior height and volume for use with one slide of the standard 1 mm thickness and a standard coverglass. The Corning Hybridization Chamber II (Cat. No. 40080) has an increased interior depth which not only allows for single slide hybridizations, but also allows the user to place two arrays face-to-face and hybridize using a single labeled target. This chamber can also be used with raised-edge coverslips (Erie Scientific M-Series Lifter Slips™) that are thicker or taller than standard thin coverglass.

Hybridzation Chambers Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
2551	Hybridization Chamber	1	5
40080	Hybridization Chamber II with Increased Depth	1	5
40001	Replacement O-rings (fit both chambers)	5	5

Liquid Handling



Stripettes, page 99

Vaccum Filters, page 105

Croygenic Vials, page 116

Overview

DESIGNED FOR PERFORMANCE

Corning Life Sciences offers a full line of liquid handling products that are manufactured under strict process controls guaranteeing consistent product performance. All Corning Life Sciences plastics manufacturing facilities are ISO 9001:2000 registered. ISO registration is recognized worldwide as a standard of excellence for quality systems.

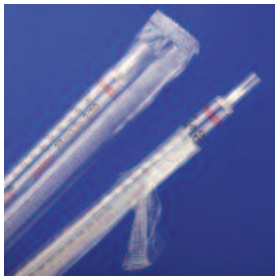
In addition, customers can now request a Certificate of Quality for any Corning® or Costar® liquid handling product. Certificates are available at **www.corning.com/lifesciences**. This certificate details lot-specific information on component materials, sterility testing and pyrogen testing. Also available are detailed product descriptions and drawings that highlight product dimensions and testing procedures. All are available simply by calling your local Corning Life Sciences office.

NONPYROGENIC CERTIFICATION

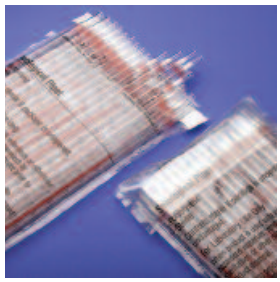
Most Corning and Costar liquid handling products are certified non-pyrogenic with a documented endotoxin level of equal to or less than 0.1 EU/mL. Endotoxins have been shown to cause variability in cell culture. Nonpyrogenic certification is another way Corning helps ensure consistent cell culture results. Corning also offers a detailed technical bulletin on the effects of endotoxins in cell culture. This may be obtained by calling your local Corning Life Sciences office or by downloading the bulletin from the Corning web site **www.corning.com/lifesciences**.

Pipets


Stripette Serological Pipets


Clear Plastic Wrap


Paper/Plastic Wrap


Bulk Pack


Clean Room Packaging

Stripette® Serological Pipets

- Stripette pipets are sterile, nonpyrogenic, and RNase-/DNase-free.
- Exclusive antidrip tip assures accurate delivery.
  - Available in 25, 50 and 100 mL sizes
- Color-coded magnifier stripes make volume reading easier.
- Bidirectional graduations provide choice of ascending and descending scales
- Negative graduations allow additional working volume.
- Four packaging options:
  - Individually wrapped, clear plastic
  - Individually wrapped, paper/plastic
  - Bulk packed for large-scale sterile and nonsterile liquid handling applications
  - Clean room packed; individually wrapped, paper/plastic, triple bagged, SAL 10^{-6}

Stripette Pipets Ordering Information

Cat. No.	Capacity (mL)	Graduations (mL)	Negative Grads. (mL)	Color Coded Stripe	Qty/Pk	Qty/Cs
Individually Wrapped, Clear Plastic Wrap						
4011	1	1/100	0.2	Yellow	100/bag	1,000
4012	1	1/100	0.2	Yellow	100/bag	200
4021	2	1/100	0.2	Green	100/bag	1,000
4051	5	1/10	2.5	Blue	50/bag	200
4101	10	1/10	3.0	Orange	50/bag	200
4492*	10	1/10	3.0	Orange	50/bag	200
4251	25	2/10	10.0	Red	50/bag	200
4501	50	1/2	10.0	Purple	25/bag	100
4484	100	1	N/A	Aqua	10/bag	100
Individually Wrapped, Paper/Plastic Wrap						
4485	1	1/100	0.2	Yellow	50/bag	1,000
4486	2	1/100	0.2	Green	50/bag	1,000
4487	5	1/10	2.5	Blue	50/bag	200
4488	10	1/10	3.0	Orange	50/bag	200
4489	25	2/10	10.0	Red	25/bag	200
4490	50	1/2	10.0	Purple	25/bag	100
4491	100	1	N/A	Aqua	10/bag	100
Bulk Packed in Bags						
4010	1	1/100	0.2	Yellow	50/bag	1,000
4020	2	1/100	0.2	Green	50/bag	1,000
4050	5	1/10	2.5	Blue	50/bag	500
4100	10	1/10	3.0	Orange	50/bag	500
4250	25	2/10	10.0	Red	25/bag	200
4500	50	1/2	10.0	Purple	25/bag	100
New *Clean Room Pack, Individually Wrapped, Paper/Plastic, Triple Bagged*						
7041	1	1/100	0.2	Yellow	50/bag	1,000
7042	2	1/100	0.2	Green	50/bag	1,000
7045	5	1/10	2.5	Blue	50/bag	200
7015	10	1/10	3.0	Orange	50/bag	200
7016	25	2/10	10.0	Red	25/bag	200
7017	50	1/2	10.0	Purple	25/bag	100
7000	100	1	N/A	Aqua	10/bag	100

*Cat. No. 4492 features a wide tip for handling viscous fluids.


Aspirating Pipets

Aspirating Pipets

Aspirating pipets are sterile, ungraduated and unplugged polystyrene pipets for aspirating liquid using vacuum suction.

Aspirating Pipets Ordering Information

Cat. No.	Volume (mL)	Packaging	Qty/Pk	Qty/Cs
4975	1	Individually wrapped, bulk packed	50	1,000
9186	2	Individually wrapped, clear plastic wrap	100	1,000
9099	5	Individually wrapped, clear plastic wrap	50	200

Pipetting Aids


Stripettor Pipetting Aid

Stripettor™ Pipetting Aids

- Lightweight, adjustable speed control, and designed for use with all serological pipets
- Nose cones are autoclavable and have a replaceable 0.2 µm hydrophobic sterilizing filter
- Operates on a rechargeable 9V nickel hydride battery and features an LED light on the handle that lets the user know when to recharge
- Unit is fully operational while recharging

Stripettor Pipetting Aid Ordering Information

Cat. No.	Product Description	Qty/Cs
4910	Stripettor with sterile filter, rechargeable battery and recharger/adapter	1
4911	Grommet replacement (silicone pipet holder)	1
4922	0.2 µm hydrophobic replacement filter	4
4923	0.2 µm hydrophobic replacement filter	25
4914	Recharger/adapter for 4910	1

Pipettors


Lambda Single Channel Pipettor

Lambda® Single Channel Pipettor

- Corning® Lambda pipettors have a contoured handgrip and hook-style hand rest for greater comfort and less fatigue during prolonged use
- Quick-turn volume adjustment knob and easy-to-read digital volume display makes volume selection easier
- Volume ranges include 0.1 to 2 µL, 0.5 to 10 µL, 2 to 20 µL, 10 to 100 µL, 20 to 200 µL, and 100 to 1000 µL
- Bottom part of unit is autoclavable
- Backed by a three-year warranty

Lambda Single Channel Pipettor Ordering Information

Cat. No.	Volume Range (µL)	Qty/Cs
4959	0.1-2.0	1
4960	0.5-10	1
4961	2-20	1
4962	10-100	1
4963	20-200	1
4964	100-1,000	1
4958	Pipettor Stand	1

8-Pette® and 12-Pette® Multichannel Pipettors

8 and 12-Pette Multichannel Pipettors

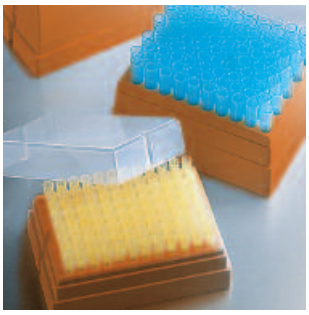
- Costar® 8-Pette and 12-Pette multichannel pipettors feature a unique, ergonomic trigger-style aspiration and dispense control mechanism designed to reduce thumb fatigue during repetitive pipetting
- Volume range is 20 to 200 µL
- Volume is adjusted with a vernier-scale spindle
- Pipettors are entirely autoclavable

8-Pette and 12-Pette Multichannel Pipettors Ordering Information

Cat. No.	Volume Range (µL)	Channels	Qty/Cs
4880	20-200	12	1
4888	20-200	8	1

Pipet Tips

Universal Fit 200 and 1000 µL Pipet Tips



Universal Fit Pipet Tips

- Corning® universal fit tips are designed to provide a reliable fit with all major brand pipettors. (A Pipet Tip Compatibility Guide can be requested or downloaded from the Corning website.)
- Beveled orifice helps ensure accurate fluid delivery
- 1-200 µL universal fit tips are graduated at the 10, 50, and 100 µL volumes
- Select from three packaging options:
  - Racked tips are certified RNase-/DNase-free and nonpyrogenic
  - Stack rack tips feature a stack of five racks, each containing 96 tips, for a total of 480 tips in a space-saving design
  - Bulk packed tips are nonsterile and very economical

Universal Fit 200 and 1,000 µL Pipet Tips Ordering Information

Cat. No.	Volume Range (µL)	Format	Color	Sterile	Racks/ Cs	Tips/ Cs
Racked Tips						
4860	1-200	96 Tips/Rack	Yellow	Yes	10	960
4863	1-200	96 Tips/Rack	Natural	No	10	960
4864	1-200	96 Tips/Rack	Natural	Yes	10	960
4865	1-200	96 Tips/Rack	Yellow	No	10	960
4867	100-1,000	100 Tips/Rack	Blue	No	10	1,000
9032	100-1,000	100 Tips/Rack	Blue	Yes	10	1,000

Universal Fit 200 and 1000 µL Pipet Tips (Continued)

Universal Fit HInged Rack Pipet Tips

Universal Fit 200 and 1,000 µL Pipet Tips Ordering Information

Cat. No.	Volume Range (µL)	Format	Color	Sterile	Racks/ Cs	Tips/ Cs
Stack Rack Tips						
4803	1-200	480 Tips/Stack Rack	Natural	No	10	4,800
4804	1-200	480 Tips/Stack Rack	Natural	Yes	10	4,800
4806	1-200	480 Tips/Stack Rack	Natural	No	2	960
Bulk Packed Tips						
4844	1-200	Bulk Pack	Natural	No	1,000	10,000
4845	1-200	Bulk Pack	Yellow	No	1,000	10,000
4862	1-200	Bulk Pack	Natural	No	1,000	1,000
4866	1-200	Bulk Pack	Yellow	No	1,000	1,000
4846	100-1,000	Bulk Pack	Blue	No	1,000	10,000
4868	100-1,000	Bulk Pack	Blue	No	1,000	1,000
Universal Fit Hinged Rack Pipet Tips						
4711	1-200 µL	96 Tip Hinged Rack	Yellow	Yes	10	960
4712	1-200 µL	96 Tip Hinged Rack	Yellow	No	10	960
4710	1-200 µL	96 Tip Insert for Hinged Rack	Yellow	No	10 Inserts	960
4714	100-1000 µL	100 Tip Hinged Rack	Blue	Yes	10	1,000
4713	100-1000 µL	100 Tip Hinged Rack	Blue	No	10	1,000
4715	100-1000 µL	100 Tip Insert for Hinged Rack	Blue	No	10 Inserts	1,000

Smart Rack Pipet Tip Refill System

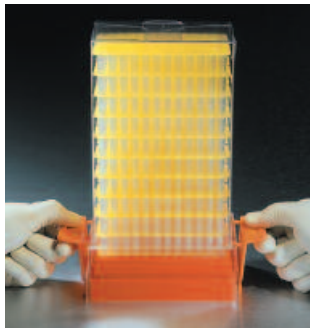
Smart Rack Pipet Tip Refill System

- Corning® Smart Rack makes refilling pipet tip racks easier than ever
- Tips are contained on an autoclavable plastic reload card and transferred to a rack with a disposable reloading device (included)
- Compatible with many popular brand 200 µL 96-tip racks
- Two configurations are available – 94-tip and 96-tip. In the 94-tip configuration, each reload card contains 94 tips and two corner anchoring pins that secure the card to the rack
- The 96-tip configuration does not include the corner anchoring pins.
- Smart Rack tips are nonsterile, autoclavable, RNase-/DNase-free, and nonpyrogenic

Smart Rack Pipet Tip Refill System Ordering Information

Cat. No.	Tip Volume (µL)	Color	Tips/Pack	Packs/Cs	Tips/Cs
4786	200	Natural	940	5	4,700
4787	200	Natural	960	5	4,800

Pipet Tip Loading System



Pipet Tip Loading System

- The Corning pipet tip loading system makes reloading racks economical and effortless
- The system consists of a one-piece base that attaches to a "magazine" consisting of 10 layers of 96 tips
- Simply place the loader and magazine over an empty rack, lower the magazine, and "click" – the rack is loaded and ready for use
- Tip loading system tips are nonsterile, autoclavable, DNase/RNase-free, and nonpyrogenic

Pipet Tip Loading System Ordering Information

Cat. No.	Description
4780	Starter Kit, natural 1-200 µL tips; includes 1 tip loader, 1 magazine with 960 tips and 10 empty racks
4781	Starter Kit, yellow 1-200 µL tips; includes 1 tip loader, 1 magazine with 960 tips and 10 empty racks

Pipet Tip Loading System Refill Magazines

- Tip loading system refills consist of magazines containing 10 layers of 96 tips
- Each magazine refills 10 racks

Pipet Tip Loading System Refill Magazines Ordering Information

Cat. No.	Tip Volume (µL)	Color	Tips/Magazine	Magazines/Cs	Tips/Cs
4783	1-200	Natural	960	5	4,800
4785	1-200	Yellow	960	5	4,800

IsoTip Filtered Pipet Tips

Isotip Filtered Pipet Tips

- IsoTip filtered pipet tips feature an inert, hydrophobic barrier that prevents aerosolized contaminants from coming in contact with pipettor shafts
- Ideal for applications where avoiding cross contamination is critical, such as DNA amplification and radioisotope handling
- Packaged sterile
- Certified RNase-/DNase-free and nonpyrogenic
- A Pipet Tip Compatibility Guide can be requested or downloaded from the Corning website.

IsoTip Filtered Pipet Tips Ordering Information

Cat. No.	Volume Range (µL)	Precise Fit	Tips/ Rack	Racks/ Cs	Tips/ Cs
4801	0.1-2.0	Gilson® and other popular ultra-micropipettors	96	10	960
4807	0.2-10	Gilson and other popular ultra-micropipettors	96	10	960
4808	0.5-10	Eppendorf® and other popular ultra-micropipettors	96	10	960
4821	1-30	All popular research-grade pipettors	96	10	960
4823	1-200	All popular research-grade pipettors	96	10	960
4810*	1-200	All popular research-grade pipettors	96	10	960
4809	100-1,000	All popular research-grade pipettors	100	10	1,000

*Extended length tip designed for use with 2-20 µL, 10-100 µL, and 20-200 µL pipettors.

1 to 200 µL Gel-Loading Pipet Tips

Gel-Loading Pipet Tips and Microvolume Gel-Loading Pipet Tips

- Corning® gel-loading pipet tips feature a capillary end that allows easy access into vertical and horizontal electrophoresis gels
- Total capacity of 200 µL
- Certified RNase-/DNase-free and nonpyrogenic
- Tips are 83 mm in length

1 to 200 µL Gel-Loading Pipet Tips Ordering Information

Cat. No.	Tip Shape	End Thickness (mm)	Sterile	Tips/ Rack	Racks/ Cs	Tips/ Cs
4853	Round	0.5	No	200	2	400
4854	Flat	0.4	No	200	2	400
4884	Flat	0.2	No	200	2	400

Microvolume Gel-Loading Pipet Tips

- Corning microvolume gel-loading tips feature a capillary end for gel-loading and are designed for use with Gilson and other popular ultra-micropipettors
- Working volume of 0.2 to 10 µL
- Certified RNase-/DNase-free and nonpyrogenic

Microvolume Gel-Loading Pipet Tips Ordering Information

Cat. No.	Tip Shape	End Thickness (mm)	Sterile	Tips/ Rack	Racks/ Cs	Tips/ Cs
4815	Flat	0.2	No	200	2	400

Microvolume Pipet Tips

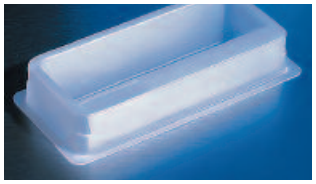
Microvolume Pipet Tips

- Microvolume tips provide accurate, reliable performance in the 0.1-10 µL range for major brand ultra-micropipettors
- All racked tips are certified RNase-/DNase-free and nonpyrogenic

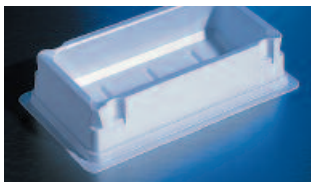
Microvolume Pipet Tips Ordering Information

Cat. No.	Volume Range (µL)	Fit	Sterile	Qty/Pk	Tips/ Cs
4826	0.1-10	Gilson® and other popular ultra-micropipettors	No	96/rack	960
4894	0.1-10	Gilson and other popular ultra-micropipettors	Yes	96/rack	960
4840	0.1-10	Gilson and other popular ultra-micropipettors	No	1,000/bag	10,000
4830	0.5-10	Eppendorf® and other popular ultra-micropipettors	Yes	96/rack	960
4834	0.5-10	Eppendorf and other popular ultra-micropipettors	No	96/rack	960
4901	0.5-10	Eppendorf and other popular ultra-micropipettors	No	1,000/bag	10,000

Reagent Reservoirs



4870 and 4871
50 mL Reagent Reservoir



4872 and 4873
100 mL Reagent Reservoir

Costar® Reagent Reservoirs are ideal for repetitively filling multichannel pipettors

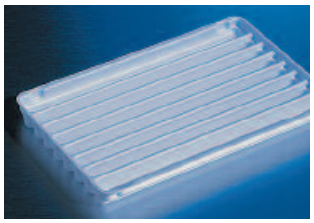
- Manufactured from modified polystyrene
- Sterile
- Disposable

Reagent Reservoirs Ordering Information

Cat No.	Volume (mL)	Color	Qty/Pk	Qty/Cs
4870	50	Natural	5/bag	200
4871	50	Natural	1/bag	100
4872	100	White	5/bag	200
4873	100	White	1/bag	100

Transtar-96® Well Liquid Transfer System

Transtar-96 System



Transtar Disposable Cartridge

- The Costar® Transtar-96 System is a portable, autoclavable liquid handling device for use with 96 well plates
- A sterile 96 tip disposable cartridge, which loads into the Transtar system, enables liquids to be aspirated, transferred and dispensed over a volume range of 25 to 200 µL in 5 µL increments
- The Transtar-96 System is ideal for changing cell culture media and screening monoclonal antibodies
- Transtar-96 System accuracy is rated at ±5% at all volume levels

Transtar-96 Well Liquid Transfer System Ordering Information

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
7605	Transtar-96, adjustable-volume pipettor	N/A	1	1
7606	Transtar elevator	N/A	1	1
7610	Transtar disposable cartridges	Yes	1	24
4876	Transtar disposable reservoir liner, open	Yes	1	100
4877	Transtar disposable reservoir liner, 12-channel	Yes	1	100
4878	Transtar disposable reservoir liner, 8-channel	Yes	1	100

Aspirator

Aspirator

The Costar aspirator is an aspirating device for safe liquid removal/disposal from a variety of laboratory vessels using standard disposable pipet tips.

Aspirator Ordering Information

Cat. No.	Description
4930	Aspirator device (includes hand piece, grommet for accessory attachment, and single-channel adapter for use with disposable pipet tips)
4931	8-channel adapter for use with disposable pipet tips

Vacuum Filters

Vacuum Filter

Corning offers a variety of filter systems, membranes, pore sizes, and materials. For help in selecting the best filter combination for your research, please refer to the Technical Appendix for *Selecting the Best Filter for Your Application* on page 119.

115 mL Vacuum Filters

- 60 mm diameter membrane
- Low center of gravity and wide base for stability
- Separate pour spout to remove filtered sample which minimizes contamination
- Individually packaged, sterile, certified nonpyrogenic

115 mL Vacuum Filters Ordering Information

Cat. No.	Membrane	Volume (mL)	Pore Size (µm)	Qty/Cs
430944	CA	115	0.22	24
430945	CA	115	0.45	24

CA = Cellulose Acetate


Tube Top Vacuum Filter

150 mL Tube Top Vacuum Filters

- 50 mm diameter membrane
- Minimizes unnecessary transfers by filtering directly into 50 mL centrifuge tube
- Includes two centrifuge tube stands with each case
- Each polypropylene centrifuge tube is supplied with an individually wrapped cap for storage
- Individually packaged, sterile, certified nonpyrogenic

150 mL Tube Top Vacuum Filters Ordering Information

Cat. No.	Membrane	Funnel Size/ Tube Size (mL)	Pore Size (µm)	Qty/Cs
430314	CA	150/50	0.45	12
430320	CA	150/50	0.22	12

CA = Cellulose Acetate


Vacuum Filter Systems

Vacuum Filter Systems

- Four sizes: 150 mL; 250 mL, 500 mL, and 1L
- Adapters are color coded by membrane type for easy product identification
- Angled hose connector simplifies vacuum line attachment
- Receiver bottles feature easy grip sides for improved handling
- Individually packaged, sterile, certified nonpyrogenic
- Caps for receiver bottles are sterile and individually packaged
- Extra plastic storage bottles are available, see page 109

Vacuum Filter Systems Ordering Information

Cat. No.	Membrane	Funnel/Bottle Volume (mL)	Pore Size (µm)	Color-Coded Adapter	Qty/Cs
150 mL Capacity, 50 mm Diameter Membrane					
431153	PES	150/150	0.22	Yellow	12
431154	CA	150/150	0.22	Orange	12
431155	CA	150/150	0.45	Orange	12
250 mL Capacity, 50 mm Diameter Membrane					
430756	CN	250/250	0.22	Blue	12
430767	CA	250/250	0.22	Orange	12
430768	CA	250/250	0.45	Orange	12
430771	NY	250/250	0.2	Red	12
431096	PES	250/250	0.22	Yellow	12
500 mL Capacity, 70 mm Diameter Membrane					
430758	CN	500/500	0.22	Blue	12
430769	CA	500/500	0.22	Orange	12
430770	CA	500/500	0.45	Orange	12
430773	NY	500/500	0.2	Red	12
431097	PES	500/500	0.22	Yellow	12
1,000 mL Capacity, 90 mm Diameter Membrane					
430186	CN	1,000/1,000	0.22	Blue	12
430515	NY	1,000/1,000	0.2	Red	12
430516	CA	1,000/1,000	0.45	Orange	12
430517	CA	1,000/1,000	0.22	Orange	12
431098	PES	1,000/1,000	0.22	Yellow	12
431205*	CA	500*/1,000	0.22	Orange	12
431206*	CA	500*/1,000	0.45	Orange	12

*500 mL Funnel with 70 mm membrane.
PES = Polyethersulfone, CA = Cellulose Acetate, CN = Cellulose Nitrate, NY = Nylon.

Bottle Top Vacuum Filters

Bottle Top Vacuum Filters

- Individually packaged, sterile and certified nonpyrogenic
- Adaptors are color coded by membrane type
- Available in 33 mm and 45 mm neck sizes to fit most glass and plastic media storage bottles
- 45 mm neck sizes fit on Corning® plastic storage bottles, see page 109

Bottle Top Vacuum Filters Ordering Information

Cat. No.	Membrane	Volume (mL)	Neck Size (mm)	Pore Size (µm)	Color-Coded Adapter	Qty/Cs
150 mL Capacity, 50 mm Diameter Membrane						
430624	CA	150	33	0.22	Orange	48
430625	CA	150	33	0.45	Orange	48
430626	CA	150	45	0.22	Orange	48
430627	CA	150	45	0.45	Orange	48
431160	PES	150	33	0.22	Yellow	48
431161	PES	150	45	0.22	Yellow	48
500 mL Capacity, 70 mm Diameter Membrane						
430049	NY	500	45	0.2	Red	12
430512	CA	500	33	0.45	Orange	12
430513	CA	500	45	0.22	Orange	12
430514	CA	500	45	0.45	Orange	12
430521	CA	500	33	0.22	Orange	12
431117	PES	500	33	0.22	Yellow	12
431118	PES	500	45	0.22	Yellow	12
1,000 mL Capacity, 90 mm Diameter Membrane						
430015	CA	1,000	45	0.22	Orange	12
431174	PES	1,000	45	0.22	Yellow	12

PES = Polyethersulfone, CA = Cellulose Acetate, CN = Cellulose Nitrate, NY = Nylon.

Syringe Filters

Syringe Filters

- A variety of membranes are available to meet your needs: Polyethersulfone (PES) – low protein binding and faster flow rates; surfactant-free cellulose acetate (SFCA) – lowest protein binding; Teflon (PTFE) – chemical resistance; regenerated cellulose (RC) – best choice for DMSO compatibility; Nylon (NY) - hydrophilic, surfactant-free and lowest extractable.
- 100% integrity tested, certified nonpyrogenic and noncytotoxic, manufactured in accordance with ISO 9002 standards

Syringe Filters Ordering Information

Cat. No.	Diameter (mm)	Pore Size (µm)	Membrane Material	Housing Material	Sterile	Inlet/ Outlet	Packaging	Qty/ Cs
431212	4	0.2	RC	PP	Yes	LL/LS	Ind	50
431215	15	0.2	RC	PP	Yes	LL/LS	Ind	50
431218	26	0.2	SFCA-PF	AC	Yes	LL/LS	Ind	50
431219	26	0.2	SFCA	AC	Yes	LL/LS	Ind	50
431220	26	0.45	SFCA	AC	Yes	LL/LS	Ind	50
431221	26	0.8	SFCA	AC	Yes	LL/LS	Ind	50
431222	25	0.2	RC	PP	Yes	LL/LS	Ind	50
431224	25	0.2	NY	PP	Yes	LL/LS	Ind	50
431225	25	0.45	NY	PP	Yes	LL/LS	Ind	50
431227*	50	0.2	PTFE	PP	Yes	HB/HB	Ind	12
431229	26	0.2	PES	AC	Yes	LL/LS	Ind	50
431231	25	0.45	PTFE	PP	No	LL/LS	Bulk	50

PP = Polypropylene, AC = Acrylic Copolymer, LL = Luer Lock/Female, LS = Luer Slip/Male, HB = Hose Barb, NY = Nylon, PES = Polyethersulfone, PTFE = Teflon, RC = Regenerated Cellulose, SFCA = Surfactant Free Cellulose Acetate, SFCA-PF = Surfactant Free Cellulose Acetate with Prefilter.
*Recommended as in-line air filter.

Spin-X® Centrifuge Tube Filters


Spin-X Centrifuge Tube Filters

- Costar® Spin-X centrifuge tube filters consist of a membrane-containing filter unit within a microcentrifuge tube.
- Uses:
  - Removing bacteria, cells and particles from liquids
  - HPLC sample preparation
  - DNA removal from agarose or acrylamide gels. Maximum RCF (Relative Centrifugal Force [x g]) is 16,000

Spin-X Centrifuge Tube Filters Ordering Information

Cat. No.	Membrane Material	Working Volume (µL)	Pore Size (µm)	Sterile	Tube Size (mL)	Qty/Cs
8160	CA	500	0.22	Yes	2.0	96
8161	CA	500	0.22	No	2.0	100
8162	CA	500	0.45	Yes	2.0	96
8163	CA	500	0.45	No	2.0	100
8169	NY	500	0.22	No	2.0	200
8170	NY	500	0.45	No	2.0	200

CA = Cellulose Acetate, NY = Nylon.

Storage Bottles – Polystyrene

- Disposable polystyrene bottles for storage of media, buffers and other aqueous solutions
- Two styles:
  - Low profile, easy grip style has sides that facilitate handling
  - Traditional style has smooth sides
- Plug seal caps (45 mm) provide an airtight seal and help minimize the risk of contamination.
- Bottles can be used with Corning® Vacuum Filter Systems, see page 105
- Sterile, certified nonpyrogenic

Corning Easy Grip Style Storage Bottles Ordering Information

Cat. No.	Volume (mL)	Neck Size (mm)	Qty/Pk	Qty/Cs
431175	150	45	2	24
430281	250	45	2	24
430282	500	45	2	24
430518	1,000	45	2	24

Costar® Traditional Style Storage Bottles Ordering Information

Cat. No.	Volume (mL)	Neck Size (mm)	Qty/Pk	Qty/Cs
8388	125	45	1	24
8390	250	45	1	12
8393	500	45	1	12
8396	1,000	45	1	12

Storage Bottles – Square, Polycarbonate

Corning square polycarbonate storage bottles are easier to handle, require less space (13-20%) on the shelf or in the autoclave and are ideal for mixing, sampling and storage.

- Strong polycarbonate bottles are more break-resistant than other glass or plastic bottles.
- Screened white enamel graduations are easier to see than molded graduations.
- Sterilized by gamma radiation
- Large white marking spot for easier identification
- Bottles can be autoclaved once at 121°C and 15 psi. Repeated autoclaving weakens polycarbonate and is not recommended.
- Optional reusable caps with silicone septa (Corning Cat. Nos. 1395-45HTSC, 1395-45SS, 1395-45TS) for syringe sampling or introduction of reagents are available for these caps.
- Store up to -80°C

Corning Square Polycarbonate Storage Bottles Ordering Information

Cat. No.	Capacity (mL)	Shape	Bottle Material	Neck Dia. (mm)	Qty/ Bag	Qty/ Cs
431430	150	Square	Polycarbonate	45	1	24
431431	250	Square	Polycarbonate	45	1	24
431432	500	Square	Polycarbonate	45	1	24
431433	1000	Square	Polycarbonate	45	1	24

Containers

- Flexible polypropylene bottom with snap-on polyethylene lid serves as a beaker or storage container
- Graduated in both milliliters and ounces
- Certified nonpyrogenic

Containers Ordering Information

Cat. No.	Description	Sterile	Capacity (mL)	Qty/Pk	Qty/Cs
430179	Container and Lid	Yes	250	1	100
430180	Container Only	Yes	250	20	500
430181	Lid Only	Yes	n/a	20	500

DISPOSABLE SAMPLE CONTAINERS

1700 Corning® Coliform Water Test Sample Container, Sterile* with Sodium Thiosulfate Tablet

Sterile container used in testing for the presence of coliform, a microbiological contaminant in drinking water. Manufactured from pure polypropylene in a sterile environment. The one-piece container has attached lid to reduce chance of contamination. Locking arrow assures sterility has not been compromised. The EPA fill line of 100 mL ±2.5% makes it easy to use. A sodium thiosulfate tablet has been added to each container thus saving lab prep time and expense. Leak tight when sealed properly. An added benefit is the tie-down to protect from accidental opening and also serves as a custody seal. Sample label and instructions for use are supplied with each. A low cost, convenient product which meets EPA requirements.

Cat. No.	Description	Capacity (mL)	Approx. Diam. x Height (mm)	Qty/Cs
1700-100	Container w/tablet	100-120	65 x 120	100

*Sterile-by-process.

1705 Corning Water Test Sample Container, Sterile* without Sodium Thiosulfate Tablet

Sterile container used in the testing of non-chlorinated drinking water. Manufactured from pure, recyclable polypropylene. The one-piece container has attached lid to reduce chance of contamination. Locking arrow assures sterility has not been compromised. Leak tight when sealed properly. An added benefit is the tie-down which protects against accidental opening.

Cat. No.	Description	Capacity (mL)	Approx. Diam. x Height (mm)	Qty/Cs
1705-100	Container w/o Tablet	100-120	65 x 120	100

*Sterile-by-process.

1730 Corning Snap-Seal Plastic Sample Containers

Designed for a wide variety of applications, these containers provide a reliable leak-tight seal when closed properly. The Snap-Seal locking device keeps the cap closed and secure. The specially designed hinged cap stays in place in use, reducing the chance of sample contamination. The containers are made of recyclable polypropylene, in a translucent style for normal usage. The containers are graduated in both milliliters and ounces, and the cap has a rough surface for marking.

Cat. No.	Capacity	Color	Approx. Diam. x Height (mm)	Qty/Cs
1730-5X	0.45 oz. (13 mL)	Natural	16 x 94	500
1730-2C	1.5 oz. (45mL)	Natural	30 x 84	400
1730-4H	4 oz. (120 mL)	Natural	45 x 91	200
1730-4L	4 oz. (120 mL)	Natural	68 x 52	200
1730-8	8 oz. (240 mL)	Natural	80 x 75	100
1730-10	10 oz. (300 mL)	Natural	63 x 112	100

Cylinder

- Optically clear polystyrene
- Sterile
- Graduated for accurate dispensing
- A polyethylene dust cover is included

Cylinder Ordering Information

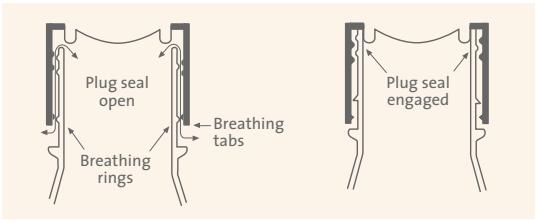
Cat. No.	Capacity (mL)	Graduation (mL)	Sterile	Qty/Pk	Qty/Cs
430182	100	1	Yes	1	50

Erlenmeyer Flasks

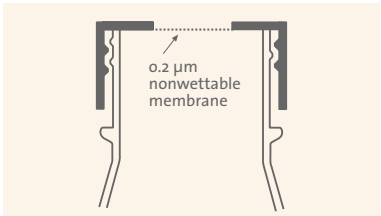
1L Erlenmeyer Flask

Polycarbonate Erlenmeyer Flasks

- Made from optically clear polycarbonate
- Ideal for shaker culture applications
- Two-position polypropylene plug seal caps can be open for gas exchange or closed for liquid-tight seal
- Vent cap option for continuous gas exchange while ensuring sterility and preventing leakage
- Sterilized by gamma radiation
- Certified nonpyrogenic



Breathable two-position plug seal caps feature one-piece linerless construction with a flexible plug for a gas- and liquid-tight seal. In addition, the unique breathable cap design allows use in either an open or closed mode.



Vent caps contain a 0.2 µm nonwettable membrane sealed to the cap, providing consistent, sterile gas exchange while minimizing the risk of contamination.

Shaker Flask Application Tip

Corning recommends starting with a shaking rate of 75-125 RPM (orbital shaker) and a medium volume of 30-40% of the nominal flask capacity.

Polycarbonate Erlenmeyer Flasks Ordering Information

Cat. No.	Capacity (mL)	Graduation (mL)	Neck Diameter (mm)	Cap Style	Qty/Pk	Qty/Cs
430421	125	25	26	Plug Seal	1	50
431143	125	25	26	Vent Cap	1	50
430183	250	25	31	Plug Seal	1	50
431144	250	25	31	Vent Cap	1	50
430422	500	50	43	Plug Seal	1	25
431145	500	50	43	Vent Cap	1	25
431146	1,000	50	43	Plug Seal	1	25
431147	1,000	50	43	Vent Cap	1	25

431255 2L Erlenmeyer Flask

431252 3L Fernbach Culture Flask

Polycarbonate 2L and 3L Flasks

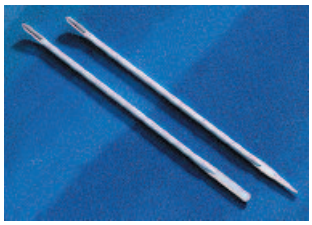
- Made from optically clear polycarbonate
- Ideal for shaker and suspension culture applications
- Available with or without baffled bottoms
- Features a hydrophobic membrane in cap for applications requiring sterile gas exchange
- Sterilized by gamma radiation
- Certified nonpyrogenic
- Solid and vent caps available separately

Polycarbonate 2L and 3L Flasks Ordering Information

Cat. No.	Description	Sterile	Qty/Cs
431255	Erlenmeyer Flask, 2L, Polycarbonate	Yes	6
431256	Erlenmeyer Flask, 2L, Polycarbonate, Baffled Bottom	Yes	6
431252	Fernbach Culture Flask, 3L, Polycarbonate	Yes	4
431253	Fernbach Culture Flask, 3L, Polycarbonate, Baffled Bottom	Yes	4
431339	Cap, Vented, 48 mm for 2L Flask	Yes	24
431340	Cap, Vented, 70 mm for 3L Flask	Yes	24
431364	Cap, Solid, 48 mm for 2L	Yes	24
431363	Cap, Solid, 70 mm for 3L	Yes	24

Spatulas

Spatulas



Microspatulas

- Corning® spatulas are designed to save time and to provide contamination-free samples
- Individually packaged, certified RNase-/DNase-free, nonpyrogenic, antistatic and sterile
- Eliminates the recycling and resterilizing necessary with reusable spatulas
- Available in five different configurations
- Microspatulas are available in two configurations

Spatulas Ordering Information

Cat. No.	Description	Qty/Cs
3003	Spatula, Tapered Blade/Spoon	100
3004	Spatula, Small Spoon/Spoon	100
3005	Spatula, Round End/Spoon	100
3006	Spatula, V-Scoop/Spoon	100
3007	Spatula, Flat End/Spoon	100
3012	Microspatula, Tapered End/Scoop	50
3013	Microspatula, Rounded End/Scoop	50

Centrifuge Tubes

15 mL Centrifuge Tube with CentriStar Cap

15 mL Centrifuge Tubes

- Corning® 15 mL centrifuge tubes feature black printed graduations and a large white marking spot
- Available with your choice of cap styles; the advanced CentriStar™ cap or the original plug seal cap
- Available in racks or bulk packed in ziplock, resealable sleeves
- Sterile, certified nonpyrogenic, and RNase-/DNase-free
- 95 k PA (14 psi) pressure tested – plug seal cap only
- Foam racks also available separately

15 mL Centrifuge Tubes Ordering Information

Cat. No.	Material	Cap Style	Max. RCF	Qty/Pk	Qty/Cs
430053	PET	Plug Seal Cap	3,600	25/Sleeve	500
430055	PET	Plug Seal Cap	3,600	50/Rack	500
430052	PP	Plug Seal Cap	12,000	50/Rack	500
430766	PP	Plug Seal Cap	12,000	25/Sleeve	500
430790	PP	CentriStar Cap	12,000	50/Rack	500
430791	PP	CentriStar Cap	12,000	25/Sleeve	500
431355	Foam Centrifuge Tube Rack, 15 mL				20

PP = Polypropylene, PET = Polyethylene Terephthalate, RCF = Relative Centrifugal Force (x g).

50 mL Centrifuge Tube with CentriStar Cap

50 mL Centrifuge Tubes

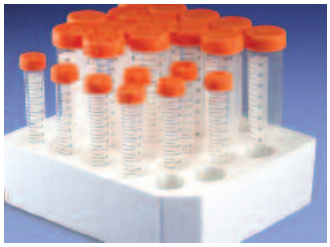
- Corning 50 mL centrifuge tubes feature black printed graduations and a large white marking spot
- Available with your choice of cap styles: the advanced CentriStar cap or the original plug seal cap
- Available in racks or bulk packed in ziplock, resealable sleeves
- Sterile, certified nonpyrogenic, and RNase-/DNase-free
- 95 k PA (14 psi) pressure tested
- Foam racks also available separately

50 mL Centrifuge Tubes Ordering Information

Cat. No.	Material	Cap Style	Max. RCF	Qty/Pk	Qty/Cs
430290	PP	Plug Seal Cap	15,500	25/Rack	500
430291	PP	Plug Seal Cap	15,500	25/Sleeve	500
430304	PET	Plug Seal Cap	3,600	25/Rack	500
430828	PP	CentriStar Cap	15,500	25/Rack	500
430829	PP	CentriStar Cap	15,500	25/Sleeve	500
4558	PP	CentriStar Cap	15,500	25/Universal Rack*	300
4365	Foam Centrifuge Tube Rack, 50 mL			–	20
4366	Universal Foam Centrifuge Tube Rack, 15 mL and 50 mL			–	20

PP = Polypropylene, PET = Polyethylene Terephthalate, RCF = Relative Centrifugal Force (x g).
*New innovative universal rack can hold 50 mL and 15 mL tubes securely, allowing researchers to work with and store both size tubes in the same rack, saving bench and storage space.

Bulk Pack – Ziplock Bag



Universal Rack

Foam Centrifuge Tube Racks

Self Standing 50 mL Centrifuge Tube with Flat Cap

Self-Standing 50 mL Centrifuge Tubes

- Corning® 50 mL centrifuge tubes feature black printed graduations and a large white marking spot
- Available with your choice of flat or the original plug seal cap
- Tubes are bulk packed in ziplock, resealable sleeves
- 95 k PA (14 psi) pressure tested – plug seal cap only
- Sterile, certified nonpyrogenic, and RNase-/DNase-free

Self-Standing 50 mL Centrifuge Tubes Ordering Information

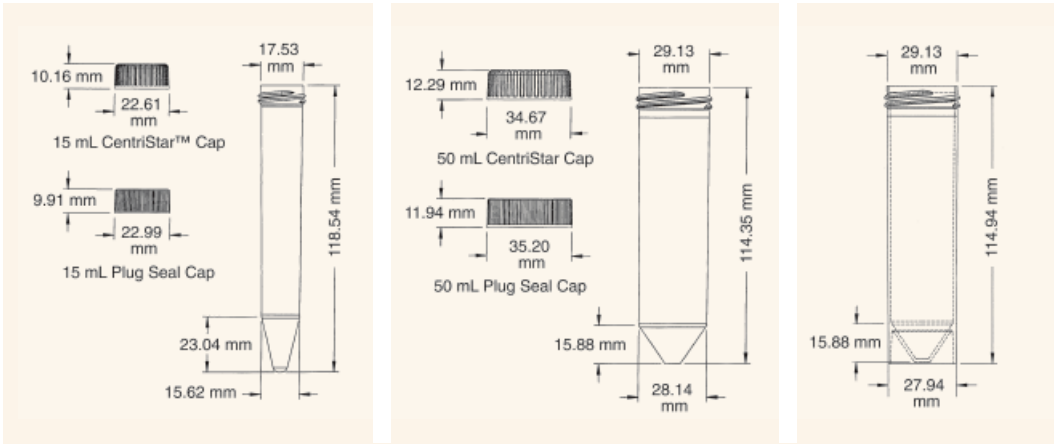
Cat. No.	Material	Cap Style	Max. RCF	Qty/Sleeve	Qty/Cs
430897	PP	Plug Seal Cap	3,000	25	500
430921	PP	Flat Cap	3,000	25	500

PP = Polypropylene, RCF = Relative Centrifugal Force (x g).

CentriStar™ Cap

Corning 15 mL and 50 mL centrifuge tubes are now available with the advanced CentriStar cap. The CentriStar cap has an easy-on/easy-off flat top and offers advanced ergonomics with its wider knurls and roll-over edge design for easier gripping. This design includes a revolutionary plug feature that minimizes the risk of seepage when used under recommended conditions.

Dimensions of Corning 15 mL and 50 mL Centrifuge Tube



500 and 250 mL Centrifuge Tubes

250 mL and 500 mL Centrifuge Tubes and Support Cushions

- Corning 250 mL and 500 mL polypropylene tubes are ideal for applications requiring large-volume centrifugation
- Each case of tubes contains a rack to facilitate handling
- Support cushions must be used with this product unless the rotor has appropriately shaped V-bottom holders
- Tubes are sterile and certified nonpyrogenic

250 mL and 500 mL Centrifuge Tubes Ordering Information

Cat. No.	Description	Material	Cap Style	Max RCF	Qty/Pk	Qty/Cs
430776	250 mL Tube	PP	Plug	6000	6	102
430236	250 mL Support Cushion	PEI	n/a	n/a	n/a	6
431123	500 mL Tube	PP	Plug	6000	6	36
431124	500 mL Support Cushion	PEI	n/a	n/a	n/a	6

PP = Polypropylene, PEI = Polyetherimide, RCF = Relative Centrifugal Force (x g).

Microcentrifuge Tubes

Micrcoentrifuge Tubes

Corning offers two styles of microcentrifuge tubes: traditional snap cap tubes for quick access or screw cap tubes for greater sealing security.

Snap Cap Polypropylene Microcentrifuge Tubes

- Costar® microcentrifuge tubes are certified RNase-/DNase-free
- Supplied nonsterile and are autoclavable
- External graduations and frosted writing spot for easy sample identification
- Positive seal design allows for repeated opening and closing
- Flat cap surface for convenient labeling
- Withstands a maximum RCF of 17,000 x g
- Costar low binding microcentrifuge tubes feature a bonded polymer technology that reduces protein and nucleic acid binding, resulting in better sample recovery

Snap Cap Polypropylene Microcentrifuge Tubes Ordering Information

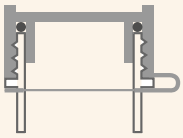
Cat. No.	Volume (mL)	Color	Qty/Pk	Qty/Cs
Snap Cap Microcentrifuge Tubes				
3208	0.65	Natural	500	1,000
3209*	0.65	Rainbow*	200	1,000
3620	1.7	Natural	500	500
3621	1.7	Natural	500	5,000
3622*	1.7	Rainbow*	100	500
3213	2.0	Natural	500	1,000
Low Binding Snap Cap Microcentrifuge Tubes Ordering Information				
3206	0.65	Natural	500	500
3207	1.7	Natural	250	250

*Rainbow pack includes one bag each of blue, green, yellow, red, and orange tubes.

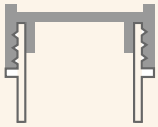
Microcentrifuge Tubes

Screw Cap Polypropylene Microcentrifuge Tubes

- Corning® polypropylene microcentrifuge tubes feature screw caps that provide a tight secure seal
- Choice of attached cap with silicone O-ring or unattached rim seal cap
- All tubes have a large white marking spot.
- Withstands a maximum RCF of 13,000 x g
- Sterile



- Attached loop cap allows for optimum one-handed convenience. Silicone O-ring gasket provides a snug seal, safeguarding samples against leakage.



- Easy-to-use unattached rim seal cap design twists on or off in a single turn.

Screw Cap Polypropylene Microcentrifuge Tubes Ordering Information

Cat. No.	Volume (mL)	Cap Style	O-ring	Self Standing	Qty/Cs
430909	1.5	Attached	Yes	No	500
430915	2.0	Attached	Yes	Yes	500
430917	2.0	Unattached	No	Yes	500

Cryogenic Vials and Accessories

Corning offers three styles of cryogenic vials as well as storage racks and boxes.

External Thread Cryogenic Vial

- Color-coded polypropylene cap inserts simplify vial identification. Available in variety packs of white, blue, green, red, and yellow.
- Silicone washer provides a secure seal.
- Easy-to-read black graduations for partial volumes
- Self-standing base, self-locking skirt

Internal Thread Cryogenic Vial

- Color-coded polypropylene cap inserts simplify vial identification. Available in variety packs of white, blue, green, red, and yellow.
- Silicone washers or rubber O-rings provide a secure seal.
- Easy-to-read black graduations for partial volumes
- Self-standing base, self-locking skirt

External Thread Plug Seal Cap

- Sure-grip plug seal screw cap
- Inner cap ring assures a tight seal.

External Thread Cryogenic Vials

External Thread Cryogenic Vials

- Manufactured from polypropylene to withstand temperatures down to -196°C
- Larger marking spot
- Black graduations
- Certified RNase-/DNase-free
- Vials have a silicone washer for a secure seal.
- Vials may be color coded with inserts, see page 118
- Self-standing vials have a special base design allowing them to be locked into cryogenic rack and tray (Cat. No. 430525 or 431131) for single-handed manipulation
- Sterilized by gamma radiation
- Certified nonpyrogenic
- Free foam rack with each case

External Thread Cryogenic Vials Ordering Information

Cat. No.	Capacity (mL)	Style	Self-Standing	Qty/Pk	Qty/Cs
430658	1.2	Conical Bottom	Yes	50	500
430659	2.0	Round Bottom	Yes	50	500
430661	2.0	Round Bottom	No	50	500
430662	4.0	Round Bottom	Yes	50	500
430663	5.0	Round Bottom	Yes	50	500

Warning! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen. Only store vials in the vapor phase above the liquified gas. Always use appropriate safety equipment when removing vials from cryogenic storage.

Cryogenic Vial Safety Tip

Appropriate safety equipment (gloves, face shields, biological safety cabinets, hoods, etc.) should always be used to protect personnel when removing vials or ampules from cryogenic storage systems.

Internal Thread Cryogenic Vials

Internal Thread Cryogenic Vials

- Manufactured from polypropylene to withstand temperatures down to -196°C
- Larger marking spot
- Black graduations
- Certified RNase-/DNase-free
- Vials have a silicone washer or rubber O-ring for a secure seal
- Vials may be color coded with inserts, see page 118
- Self-standing vials have a special base design allowing them to be locked into cryogenic rack and tray (Cat. No. 430525 or 431131) for single-handed manipulation
- Sterilized by gamma radiation
- Certified nonpyrogenic
- Free foam rack with each case

Internal Thread Cryogenic Vials Ordering Information

Cat. No.	Capacity (mL)	Style	Self-Standing	Seal Type	Qty/Pk	Qty/Cs
430487	1.2	Conical Bottom	Yes	Washer	50	500
430488	2.0	Round Bottom	Yes	Washer	50	500
430489	2.0	Round Bottom	No	Washer	50	500
430490	4.0	Round Bottom	No	Washer	50	500
430491	4.0	Round Bottom	Yes	Washer	50	500
430492	5.0	Round Bottom	No	Washer	50	500
430656	5.0	Round Bottom	Yes	Washer	50	500
431386	2.0	Round Bottom	Yes	Washer	50	250

Warning! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen. Only store vials in the vapor phase above the liquified gas. Always use appropriate safety equipment when removing vials from cryogenic storage.

External Thread Cryogenic Vials with Plug Seal Cap

External Thread Cryogenic Vials with Plug Seal Cap

- Manufactured from polypropylene to withstand temperatures down to -196°C
- Vials feature an external thread with a traditional plug seal cap design for a secure seal
- Cap does not accept color-coded inserts
- Sterilized by gamma radiation
- Certified nonpyrogenic

External Thread Cryogenic Vials with Plug Seal Cap Ordering Information

Cat. No.	Capacity (mL)	Style	Self-Standing	Qty/Pk	Qty/Cs
430289	2.0	Round Bottom	No	50	500

Warning! Do not use cryogenic vials for storage in the liquid phase of liquid nitrogen. Only store vials in the vapor phase above the liquified gas. Always use appropriate safety equipment when removing vials from cryogenic storage.

Cap Inserts for Cryogenic Vials


Cap Inserts

- Cap inserts provide color coding for easy sample identification
- Inserts are packaged in resealable bags
- Nonsterile
- Cap inserts fit all Corning® cryogenic vials except Cat. No. 430289

Cryogenic Vials Cap Inserts Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
430499	Assorted colors, polypropylene cap inserts: 100 each of white, blue, red, green, and yellow	50	500
2015	White polypropylene cap inserts	50	500
2016	Blue polypropylene cap inserts	50	500
2017	Red polypropylene cap inserts	50	500
2018	Green polypropylene cap inserts	50	500
2019	Yellow polypropylene cap inserts	50	500

Cryogenic Vial Racks and Storage Boxes

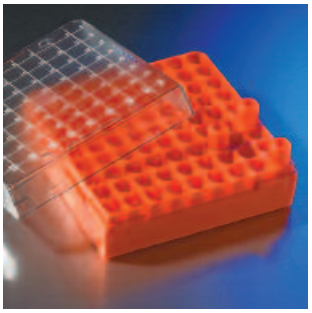

Cryogenic Vial Racks

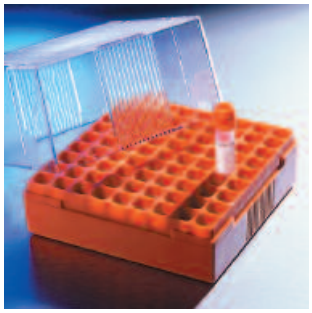
- Reusable racks are designed for use with most cryogenic vials
- Cat. No. 430525 has a locking feature for use with all Corning self-standing vials

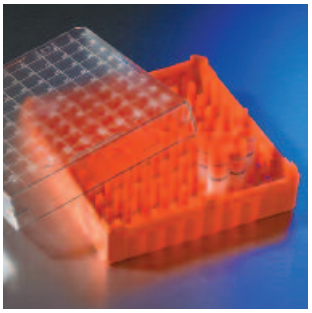
Cryogenic Vial Racks and Storage Boxes Ordering Information

Cat. No.	Description	Qty/Pk	Qty/Cs
430525	Polycarbonate rack and tray, holds 30 vials; self-locking design in ice/water bath	1	1
430526	Polycarbonate rack only, holds 30 vials; self-locking design	1	1
431131	Reusable orange polypropylene vial rack, holds 50 vials; self-locking design	2	2
431119	81 count (9 x 9 array) Cryogenic Box, for 1-2 mL vials	5	10
431120	81 count (9 x 9 array) Cryogenic Box, for 4-5 mL vials	5	10
431121*	100 count (10 x 10 array) Cryogenic Box, for 1-2 mL vials	5	10

*431121 accepts internally threaded cryogenic vials only.


431119 Cryogenic Storage Box


431120 Cryogenic Storage Box


431121 Cryogenic Storage Box

Technical Appendix

SELECTING THE BEST FILTER FOR YOUR APPLICATION

Choosing a filter does not have to be complicated - Corning has simplified the process. Just follow these four easy steps:

Step 1: Match your application with the best pore size.

Step 2: Select the best membrane and housing material for your application.

Step 3: Select the correct membrane diameter to optimize flow rate and throughput.

Step 4: Choose the best filter design for your application.

Step 1: Match Your Application with the Best Pore Size

The pore size is usually determined by your application or objective.

- Routine laboratory sterilization of most media, buffers, biological fluids and gases is usually done with 0.2 or 0.22 µm pore filter membranes
- Clarification and prefiltration of solutions and solvents is best accomplished with 0.45 µm or larger filter membranes
- Prefiltration to improve filter performance can also be accomplished by the use of glass fiber prefilters sold separately.

Use Table 1 to match your applications with a recommended membrane and pore size.

Step 2: Select the Best Membrane and Housing Material for Your Application

Your filter unit must be fully compatible with the chemical characteristics of your sample.

- Some filter membranes contain nontoxic wetting agents that may interfere with some applications
- Other membranes may bind proteins or other macromolecules leading to premature filter clogging or loss of valuable samples

Therefore, it is very important to understand their characteristics and the potential effects filter membranes can have on the solutions they contact. The following four graphs (Figure 1) compare the flow rates, levels of extractable materials, and relative amounts of protein binding of four of the most popular membranes used in Corning® filters. Combining this with the information from Tables 2 and 3 (page 120) will help you choose the best Corning membranes for your applications.

Figure 1. Important Performance Characteristics of Corning® Filter Membranes

PES = Polyethersulfone, CA = Cellulose Acetate, CN = Cellulose Nitrate, NY = Nylon

Corning Filter Membrane Materials

Polyethersulfone (PES) membranes are the best for filtering cell culture media. PES has very low protein binding and extractables. PES also demonstrates faster flow rates than cellulose or nylon membranes.

Table 1. Selecting the Pore Size

Application	Pore Size (µm)	Membrane Availability
Sterilization and Ultracleaning of Aqueous Solutions	0.20 to 0.22	All Membranes except Teflon™
Ultracleaning of Solvents (HPLC)	0.20 to 0.22	RC*, Teflon, Nylon
Clarification of Aqueous Solutions	0.45	All Membranes except Teflon
Clarification of Solvents (HPLC)	0.45	RC, Teflon, Nylon
Coarse Particle Removal	0.8	SFCA*, Glass Fiber Prefilters

*RC = Regenerated Cellulose, SFCA = Surfactant-Free Cellulose Acetate.

Cellulose acetate (CA) membranes have a very low binding affinity for most macromolecules and are especially recommended for applications requiring low protein binding, such as filtering culture media containing sera. However, both cellulose acetate and cellulose nitrate membranes are naturally hydrophobic and have small amounts (less than 1%) of nontoxic wetting agents added during manufacture to ensure proper wetting of the membrane. If desired, these agents can be easily removed prior to use by filtering a small amount of warm purified water through the membrane or filter unit. Surfactant free cellulose acetate membranes, with very low levels of extractables, are available on some Corning® syringe filters.

Cellulose nitrate (CN) membranes are recommended for filtering solutions where protein binding is not a concern. They are recommended for use in general laboratory applications such as buffer filtration. Corning's cellulose nitrate membranes are Triton X-100®-free and noncytotoxic.

Nylon membranes are naturally hydrophilic and are recommended for applications requiring very low extractables since they do not contain any wetting agents, detergents or surfactants. Their greater chemical resistance makes them better for filtering more aggressive solutions, such as alcohols and DMSO. However, like cellulose nitrate membranes, they may bind greater amounts of proteins and other macromolecules than do the cellulose acetate or PES membranes. They are recommended for filtering protein-free culture media.

Regenerated cellulose (RC) membranes are hydrophilic and have very good chemical resistance to solvents, including DMSO. They are used to ultraclean and de-gas solvents and mobile phases used in HPLC applications.

Teflon™ (PTFE; polytetrafluoroethylene) membranes are naturally and permanently hydrophobic. They are ideal for filtering gases, including humidified air. The extreme chemical resistance of Teflon membranes makes them very useful for filtering solvents or other aggressive chemicals for which other membranes are unsuitable. Because of their hydrophobicity, Teflon membranes must be prewetted with a solvent, such as ethanol, before aqueous solutions can be filtered.

Glass fiber filters are used as depth filters for prefiltering solutions. They have very high particle loading capacity and are ideal for prefiltering dirty solutions and difficult to filter biological fluids such as sera.

Table 2. Characteristics of Corning Filter Membranes

	Cellulose Nitrate	Cellulose Acetate	Nylon	Polyether-Sulfone	Regenerated Cellulose	Teflon (PTFE)
Flow rates for medium with 10% serum	Good	Very Good	Poor	Best	NA	NA
Wetting Agents	Yes	Yes	No, naturally hydrophilic	No	Yes	Does not wet
Protein Binding	Very high	Very low	Low to moderate	Very low	Low	NA
DNA Binding	High	Very low	Very high	Very low	Low	NA
Chemical Resistance	Low	Low	Moderate to high	Low	Very high	Very high

Table 3. Chemical Resistance Guide for Corning Filters

This information has been developed from a combination of laboratory tests, technical publications, or material suppliers. It is believed to be reliable. Due to conditions outside of Corning's control, such as variability in temperatures, concentrations, duration of exposure and storage conditions, no warranty is given or is to be implied with respect to this information.

	Filter Membranes							Housing Materials				
Chemical Class	CN	CA	PC	NY	PES	RC	PTFE	PS	PP	AC	PYR	PVC
Weak Acids	2	2	1	2	3	1	1	1	1	2	1	1
Strong Acids	3	2	3	3	3	3	1	2	1	3	2	1
Alcohols	3	1	1	1	1	1	1	2	1	3	1	1
Aldehydes	2	3	2	2	3	2	1	3	1	3	1	3
Aliphatic Amines	3	3	3	1	1	1	1	3	1	3	1	2
Aromatic Amines	3	3	3	2	3	1	1	3	1	3	1	3
Bases	3	3	3	2	3	2	1	1	1	2	2	1
Esters	3	3	2	1	3	1	1	3	2	2	1	3
Hydrocarbons	2	2	2	2	3	1	1	3	2	2	1	2
Ketones	3	3	2	2	3	1	1	3	2	3	1	3

Key: 1 = Recommended, 2 = May be suitable for some applications, a trial run is recommended, 3 = Not recommended, CN = Cellulose Nitrate, CA = Cellulose Acetate, NY = Nylon, PYR = PYREX Glass, PC = Polycarbonate, PES = Polyethersulfone, RC = Regenerated Cellulose, PS = Polystyrene, PTFE = Polytetrafluoroethylene (Teflon), PP = Polypropylene, PVC = Polyvinylchloride, AC = Acrylic Copolymer.

Corning® Filter Housing Materials

The filter housing materials also must be compatible with the solutions being filtered.

Polystyrene (PS) is used in the filter funnels and storage bottles for all of the Corning plastic vacuum filters. This plastic polymer should only be used in filtering and storing nonaggressive aqueous solutions and biological fluids. Refer to Table 3 (page 120) for more chemical compatibility information.

Acrylic copolymer (AC) and **Polyvinyl chloride** (PVC) are used in some of the Corning syringe filter housings. These plastics should only be used in filtering less aggressive aqueous solutions and biological fluids. Refer to Table 3 for more chemical compatibility information.

Polypropylene (PP) is used in the Spin-X® centrifuge filters and some of the syringe and disc filter housings. This plastic polymer has very good resistance to many solvents. Refer to Table 3 for more chemical compatibility information.

Chemical Compatibility

The mechanical strength, color, appearance, and dimensional stability of Corning filters are affected to varying degrees by the chemicals with which they come into contact. Specific operating conditions, especially temperature and length of exposure, will also affect their chemical resistance. Table 3 provides basic information on the chemical resistance of Corning filter membranes and housings.

Step 3: Select the Correct Membrane Diameter to Optimize Flow Rate and Throughput

The third step is selecting a filter that will have enough volume capacity or throughput to process your entire sample quickly and efficiently. This is primarily determined by the effective surface area of the membrane. Table 4 shows the relationship between filter diameter, effective filtration surface area and expected throughput volumes. The lower values are typical of viscous or particle-laden solutions; the higher values are typical of buffers or serum-free medium.

Step 4: Choose the Best Filter Design for Your Application

Disposable Plastic Vacuum Filters

These sterile filters are available in four styles: complete filter/storage systems, bottle top filters, centrifuge tube top filters, or one-piece filter systems. Four membranes are available to meet all of your filtration needs: cellulose acetate, cellulose nitrate, nylon, or polyethersulfone.

Table 4. Typical Expected Throughput Volumes

Filter Diameter and Description	Effective Filtration Surface (cm^2)	Expected Throughput (mL)*
4 mm syringe/disc	0.07	0.05-3
15 mm syringe/disc	1.7	3-15
25 mm syringe/disc	4.8	15-100
26 mm syringe/disc	5.3	15-100
50 mm disc	19.6	100-750
50 mm vacuum system	16.6	100-750
60 mm vacuum system	24.6	200-1,000
70 mm vacuum system	38.5	300-1,500
90 mm vacuum system	58.1	500-2,000

*These values assume an aqueous solution and a 0.2 µm membrane. Solutions containing sera or other proteinaceous materials will be at the lower end of the range. Use of prefilters may extend the throughput 50 to 100% above the values shown.

Disposable Syringe/Disc Filters

The smaller conventional Corning syringe disc-type filters (4, 15, 25, and 26 mm diameter) are used with syringes which serves as both the fluid reservoir and the pressure source. The HPLC certified nonsterile syringe filters are available with nylon, regenerated cellulose or Teflon® (PTFE) membranes in polypropylene housing for extra chemical resistance. The sterile tissue culture tested syringe filters are available in PES, regenerated cellulose (ideal for use with DMSO-containing solutions) or surfactant-free cellulose acetate membranes in either polypropylene or acrylic copolymer housings.

The larger 50 mm diameter disc filter has a Teflon (PTFE) membrane and polypropylene housing with hose barb connectors. This product is ideal for filtering aggressive solvents or gases and applications requiring sterile venting of gases. Because they have a hydrophobic (will not pass aqueous solutions) membrane, they are also ideal for protecting vacuum lines and pumps.

Spin-X® Disposable Centrifuge Tube Filters

Costar® Spin-X centrifuge tube filters consist of a membrane-containing (either cellulose acetate or nylon) filter unit within a polypropylene microcentrifuge tube. They filter small sample volumes by centrifugation for bacteria removal, particle removal, HPLC sample preparation, removal of cells from media, and purification of DNA from agarose and polyacrylamide gels. (See Corning Technical Bulletin: *Spin-X Purification of DNA from agarose gels* at **www.corning.com/lifesciences**.)

Corning Filtr*EX*™ 96 and 384 Well Filter Plates

Information on Corning Filtr*EX* 96 and 384 well filter plates can be found in the Corning Genomics Selection Guide or on the Corning Life Sciences web site **www.corning.com/lifesciences**.

Table 5. Corning® Filter Designs

Design	Sterile	Filter Diameters (mm)	Available Membrane Materials	Pore Sizes (µm)	Special Features
Syringe Filters	Some	4, 15, 25, and 26	RC, PES, SFCA, NY, and PTFE	0.2, 0.45, and 0.8	Ideal for small volume pressure filtration
Disc Filters	Yes	50	PTFE	0.2	Ideal for filtering solvents and gases
Vacuum Filter Storage Systems	Yes	50, 70 and 90	PES, CA, CN, and Nylon	0.2, 0.22 , and 0.45	Easy grip bottles for storing filtrate
Bottle Top Vacuum Filters	Yes	50, 70 and 90	PES, CA, CN, and Nylon	0.2, 0.22, and 0.45	2 neck widths to fit most glass bottles
Tube Top Vacuum Filters	Yes	50	CA	0.22 and 0.45	Minimizes unnecessary transfers by filtering into a 50mL centrifuge tube
115 One Piece Vacuum Filters	Yes	60	CA and CN	0.2 and 0.45	Very economical with separate pour spout
Spin-X® Centrifuge Filters	Some	7.7	CA and Nylon	0.22 and 0.45	Ideal for purifying DNA from agarose gels
Filtr*EX*™ 96 and 384 Well Filter Plates	Some	6.4, 3.2	PVDF, GlassFiber, PES, NC, and UF	0.2, 0.45, 1.2 and others	Clear, opaque, or solvent resistant*

*Call for specific details; several custom-made products available.
CN = Cellulose Nitrate, CA = Cellulose Acetate, PES = Polyethersulfone, RC = Regenerated Cellulose, PTFE = Polytetrafluoroethylene (Teflon), SFCA = Surfactant-Free Cellulose Acetate.

CHARACTERISTICS OF CORNING PLASTICWARE

		Polystyrene	Polyethylene (High Density)	Polypropylene	Polycarbonate	Nylon	P.T.F.E. (Teflon®)
Physical Characteristics	Basic Properties	Biologically inert, hard, excellent optical qualities	Biologically inert, high chemical resistance	Biologically inert, high chemical resistance, exceptional toughness	Clear, very tough, inert, high temperature resistance	Tough, heat resistant, machinable, high moisture vapor transmission	Biologically and chemically inert, high resistant slippery surface
	Clarity	Clear	Opaque	Translucent	Clear	Opaque	Opaque
	Autoclave Results	Melts	May distort	Withstands several cycles	Withstands one cycle	OK	OK
	Heat Distortion Point	147-175°F 64-80°C	250°F 121°C	275°F 135°C	280-290°F 138-143°C	300-356°F 150-180°C	250°F 121°C
	Burning Rate	Slow	Slow	Slow	Self-extinguishing	Self-extinguishing	None
Effects of Laboratory Reagents	Weak Acids	None	None	None	None	None	None
	Strong Acids	Oxidizing acids attack	Oxidizing acids attack	Oxidizing acids attack	May be attacked	Attacked	None
	Weak Alkalies	None	None	None	None	None	None
	Strong Alkalies	None	None	None	Slowly attacked	None	None
	Organic Solvents	Soluble in aromatic chlorinated hydrocarbons	Resistant below 80°C	Resistant below 80°C	Soluble in chlorinated hydrocarbons; partly soluble in aromatics	Resistant	Resistant
Gas Permeability of Thin Wall Products*	O_2	Low	High	High	Very low	Very low	–
	N_2	Very low	Low	Low	Very low	Very low	–
	CO_2	High	Very high	Very high	Low	–	–

Portions of this table courtesy of Modern Plastics Encyclopedia. Most data are from tests by A.S.T.M. methods. Tables show averages or ranges. Many properties vary with manufacturer, formulation, testing laboratory, and the specific operating conditions.
*Obtained from a table which lists gas permeability in CC/100 sq. inches per 24 hrs./mil.

CHEMICAL COMPATIBILITY OF CORNING PLASTICWARE

	PS	PP	PVC	CA	PC	CN	NY	MCE	PTFE	PET
Acids										
Hydrochloric acid (25%)	G	G	G	N	R	R	N	O	R	R
Hydrochloric acid (concentrated)	F	G	F	N	R	N	N	N	R	O
Nitric acid (concentrated)	P	P	P	N	R	N	N	N	O	N
Nitric acid (25%)	P	G	F	N	R	L	N	O	R	R
Alcohols										
Butanol	G	G	G	R	R	R	R	R	R	R
Ethanol	G	G	G	R	R	N	R	O	R	R
Methanol	G	G	G	R	R	N	R	O	R	R
Amines										
Aniline	G	G	P	N	N	R	R	N	R	O
Dimethylformamide	P	G	F	N	N	N	R	N	R	N
Bases										
Ammonium hydroxide (25%)	F	G	G	R	N	R	R	O	N	O
Ammonium hydroxide (1N)	F	G	G	N	N	R	R	O	N	N
Sodium hydroxide	G	G	G	N	N	N	R	N	R	N
Hydrocarbons										
Hexane	P	G	F	R	R	R	R	R	R	R
Toluene	P	G	P	R	O	R	R	R	R	N
Xylene	P	F	P	R	R	R	R	R	R	N
Dioxane	P	G	P	N	N	N	R	N	R	R
Dimethylsulfoxide (DMSO)	P	G	P	N	N	N	R	N	R	O*
Halogenated Hydrocarbons										
Chloroform	P	G	P	N	N	R	R	N	R	N
Methylene chloride	P	F	P	N	N	R	R	N	R	N
Ketones										
Acetone	P	G	P	N	O	N	R	N	R	R
Methyl ethyl diketone	P	G	P	N	O	N	R	O	R	R

*Can be used with aqueous solutions containing up to 20% DMSO.

R = Recommended, L = Limited Resistance, N = Not Recommended, O = Testing Advised, F = Fair, G = Good, P = Poor, PP = Polypropylene, PVC = Polyvinyl Chloride, CA = Cellulose Acetate, PC = Polycarbonate, PTFE = Polytetrafluoroethylene PS = Polystyrene, CN = Cellulose Nitrate, NY = Nylon, MCE = Mixed Cellulose Esters, PET = Polyethylene Terephthalate.

CHARACTERISTICS OF CORNING® CENTRIFUGE TUBES

The following information is provided to serve as a general guideline for determining suitability of Corning centrifuge tubes for your applications. In addition, Corning recommends following the procedures outlined by the centrifuge manufacturer, as well as conducting a trial run to determine proper conditions before beginning any critical applications.

Corning centrifuge tubes are tested for leakage. They should not break or leak if used in a properly balanced rotor with suitable carriers, holders, and adapters that fully support the tubes when run in accordance with the guidelines in this section. These tubes are intended for one-time use only; reuse is not recommended as breakage or leakage may occur.

The recommended working temperature range for Corning centrifuge tubes is 0 to 40°C. The suitability of these tubes for storage below 0°C depends on both the solution and the storage conditions. In general, the polypropylene and PET tubes are more resistant to stress at low temperatures than polystyrene. It is strongly recommended that a trial run be performed under actual conditions to test the suitability of the tubes for frozen storage.

Suggestions for Safe Centrifugation

- ***Caution***: When centrifuging pathogenic organisms, clinical specimens known or suspected of being infectious, or any other potentially biohazardous materials, approved safety containment systems should be used. Contact your centrifuge manufacturer for appropriate accessories or recommendations.
- Read protocols and instruction manuals carefully. Do not confuse speed or revolutions per minute (RPM) with relative centrifugal force (RCF). Instructions for centrifuging a sample at a given RPM and time are incomplete unless the rotor or radius is specified. Protocols should always state the time and RCF value for centrifuging a sample.

- Proper balancing and distribution of the load in a centrifuge is critical for optimum performance and to prevent damage to the tubes or centrifuge. Opposing buckets or loads should always be balanced within the range specified by the manufacturer. Tubes should always be distributed in the buckets with respect to the center of rotation as well as the pivotal axis of the bucket. Failure to do this may prevent the bucket from achieving a horizontal position during the centrifugation run. Uneven separations or tube failure may result.

These centrifuge tubes are intended for use by persons knowledgeable in safe laboratory practices. Failure can result from surface damage, exceeding the specified RCF values, using unsuitable support systems, improper temperatures, or incompatible chemicals.

The RCF ratings for Corning® disposable centrifuge tubes have been established at room temperature using tubes filled to nominal capacity with water and spun in a horizontal rotor centrifuge for 5 minutes. The centrifuge must be equipped with the recommended carriers, adapters, and cushions that fully support the tubes. If an angle head rotor is used or proper support is not provided, RCF values will be lower. Use of liquid other than water may also lower RCF values. Please consult your centrifuge specifications and the nomogram table (page 125) to determine speeds at which maximum RCF is achieved.

Chemical Compatibility of Disposable Plastic Centrifuge Tubes

The mechanical strength, flexibility, color, weight and dimensional stability of all plastic centrifuge tubes are affected to varying degrees by the chemicals with which they come in contact. Specific operating conditions, especially temperature, RCF, rotor type, carrier design, and run length will also affect tube performance.

Physical Properties of Disposable Plastic Centrifuge Tubes

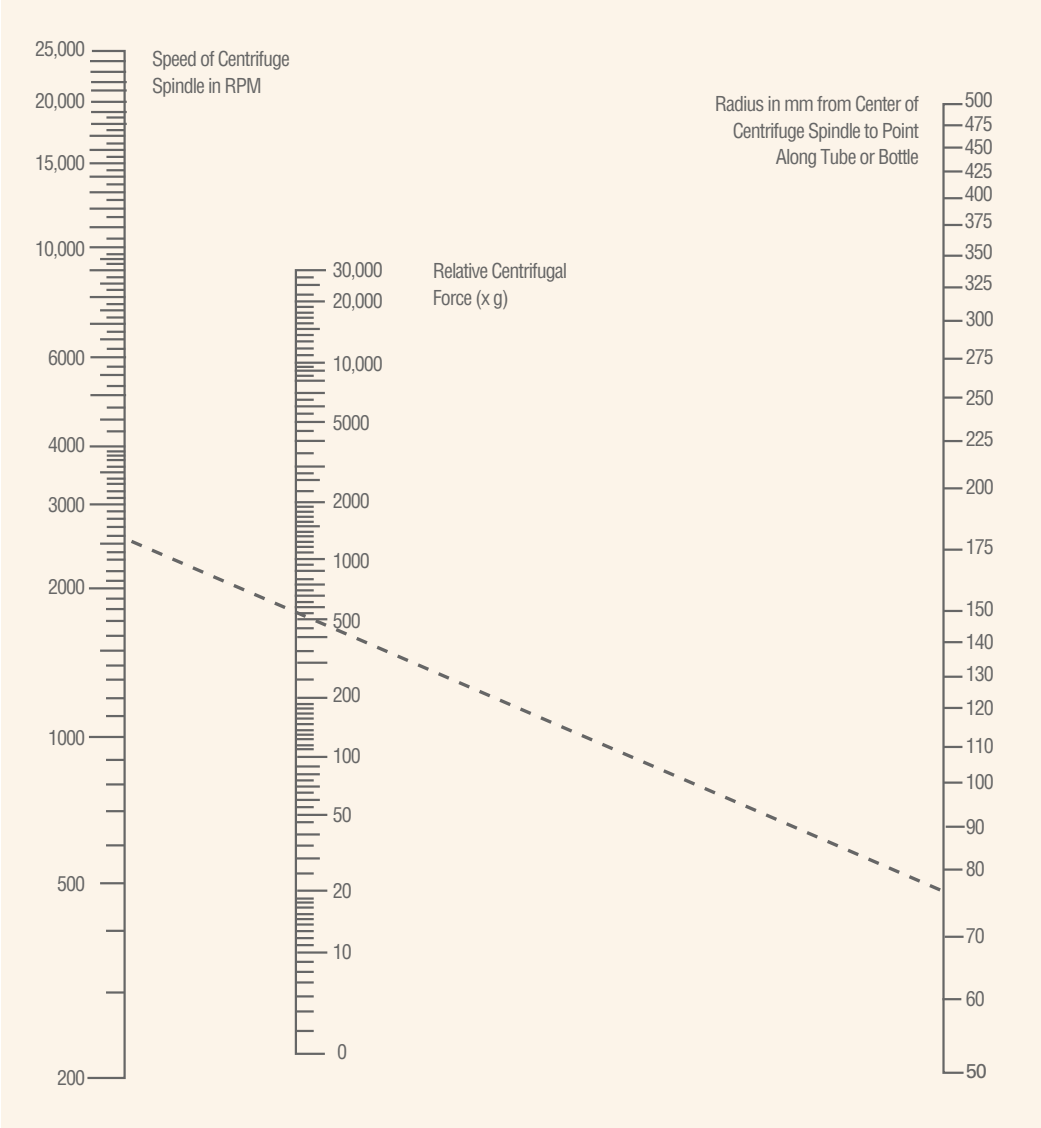
	Clear Polypropylene	New Polyethylene Terephthalate
Recommended Working Temp*	0-40°	0-40°
Heat Distortion Point	121°	70°
Flexibility	Moderate	Rigid
Transparency	Clear	Clear
Maximum RCF:		
15 mL Tube	8,400 x g	3,600 x g
50 mL Tube	9,400 x g	3,600 x g
250 mL Tube	–	–
500 mL Tube	–	–

Chemical Resistance of Disposable Plastic Centrifuge Tubes*

Chemical Class	Polyethylene Terephthalate	Polypropylene	Polyethylene Caps
Acids (weak)	1	1	1
Acids	3	1	1
Alcohols	1	1	1
Aldehydes	3[a]	2[a]	1
Bases	3	1	1
Esters	2	2	2
Hydrocarbons:			
Aliphatic	1	2	3
Aromatic	3	3[b]	3
Halogenated	3	3	3
Ketones	2	2[c]	2

*At room temperature for 24 hours.
1 = Recommended; 2 = Suitable for most applications. However, a trial run under specific operating conditions is recommended; 3 = Not recommended.
Note: a = Formaldehyde, rated 1; b = Phenol, rated 1; c = Acetone, rated 1.

Nomogram for Computing Relative Centrifugal Force



To calculate the RCF value at any point along the tube or bottle, measure the radius, in mm, from the center of the centrifuge spindle to the particular point. Draw a line from the radius value on the right hand column to the appropriate centrifuge speed on the left-hand column. The RCF value is the point where the line crosses the center column. The nomogram is based on the formula:

$RCF = (11.17 \times 10^{-7}) RN^2$

where:

R = Radius in mm from centrifuge spindle to point in tube bottom

N = Speed of spindle in RPM

Glass and Equipment

Reusable Glass, page 128

Reusable Glass

ADAPTERS

7800 PYREX® Brand, Drying Tube Adapter, ⧩ Joint

Inverted form with the inner ⧩ joint at one end only, with a single bulb. The chamber is approximately 110 mm long including the bulb, 30 mm O.D. and will take a No. 2 rubber stopper.

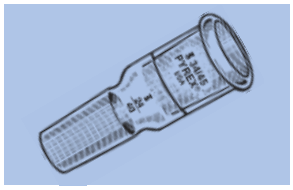
Cat. No.	⧩ Joint Size	Approx. Bulb O.D. (mm)	Approx. Length (mm)	Qty/Pk	Qty/Cs
7800-24	24/40	30	183	1	12

7805 PYREX Brand, Drying Tube Adapter

With one bulb and medium-sized ⧩ joints.

Cat. No.	Approx. Length (mm)	⧩ Joint Size	Qty/Cs
7805-24	125	24/40	1

*This tube is also a replacement part for organic chemistry kit Cat. No. 6949.



8800 PYREX Brand, Adapter, Reducing, ⧩ Joints

With an outer ⧩ joint at the top and a smaller inner ⧩ joint at the bottom.

Cat. No.	⧩ Top Outer Joint Size	⧩ Bottom Inner Joint Size	Approx. Length (mm)	Qty/Pk	Qty/Cs
8800-2419	24/40	19/38	105	2	6
8800-2924	29/42	24/40	105	2	6
8800-3424	34/45	24/40	110	–	1

8820 PYREX Brand, Adapter, Enlarging, ⧩ Joints

With an outer ⧩ joint at the top and a larger inner ⧩ joint at the bottom.

Cat. No.	⧩ Top Outer Joint Size	⧩ Bottom Inner Joint Size	Approx. Length (mm)	Qty/Pk	Qty/Cs
8820-1019	10/30	19/38	85	–	1
8820-1024	10/30	24/40	90	2	12
8820-1424	14/35	24/40	90	–	1
8820-1924	19/38	24/40	95	1	6
8820-2429	24/40	29/42	100	1	6
8820-2434	4/40	34/45	110	1	6
8820-2445	24/40	45/50	115	1	6
8820-2455	24/40	55/50	120	1	6
8820-2945	29/42	45/50	115	–	1

8821 PYREX Brand, Thermometer Adapter

One end with a ⧩ ground joint and the other end tooled to accommodate a thermometer. The adapter is supplied complete with a rubber thermometer holder, Cat. No. 7715.

Cat. No.	⧩ Joint Size	Approx. Length (mm)	Qty/Cs
8821-14	14/20	60	1
8821-19	19/22	57	1
8821-24	24/40	80	1

*This tube is also a replacement part for all Corning organic chemistry kit Cat. Nos. 6949-6949K.

8823 PYREX® Brand, Adapter, Offset, Full Length, Ⓢ Joints

With Ⓢ outer joint on one end and Ⓢ inner joint on other end. Joints are the same size on both ends.

Cat. No.	Ⓢ Joint Size	Height (mm)	Offset (mm)	Qty/Cs
8823-14	14/20	90	20	1
8823-24	24/40	160	25	1
8823-29	29/42	180	28	1

8825 PYREX Brand, Adapter, Bushing Type, Ⓢ Joints

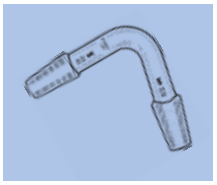
These adapters are fabricated with heavy walls for mechanical strength and are further strengthened by the heavy, uniform rim at the top which affords a serviceable finger grip. These adapters are shorter than the conventional type, thus allowing more compact and convenient assemblies. Useful for attaching Ⓢ thermometers.

Cat. No.	Ⓢ Outer Joint Size	Ⓢ Inner Joint Size	Approx. Length (mm)	Qty/Pk	Qty/Cs
8825-3424	34/45	24/40	59	2	12

8840 PYREX Brand, Adapter, 105° Angle, Ⓢ Joint with Drip Tube

The arms are approximately 105° apart. The upper end is equipped with an outer Ⓢ joint. The lower end is cut off at an angle and is used as a receiver adapter. Tube O.D. is 12 mm.

Cat. No.	Ⓢ Outer Joint Size	Qty/Pk	Qty/Cs
8840-24	24/40	2	12



8920 PYREX Brand, Connecting, 75° Angle, Two-Way Ⓢ Joints

The arms are approximately 75° apart and both are equipped with inner Ⓢ joints of the same size. Often used as a stillhead adapter

Cat. No.	Ⓢ Inner Joint Size	Qty/Pk	Qty/Cs
8920-24	24/40	2	12

8930 PYREX Brand, Connecting, 75° Angle, Distilling, Ⓢ Joints

With full-length inner Ⓢ joints of same size. The connecting arm is approximately at a 75° angle from vertical and is 200 mm long.

Cat. No.	Approx. O.D. (mm)	Ⓢ Inner Joint Size	Qty/Cs
8930-24	22	24/40	1

8940 PYREX Brand, Connecting, 105° Angle, Two-Way, Ⓢ Joints

The arms are approximately 105° apart. One end is equipped with an outer Ⓢ joint and the other end with an inner Ⓢ joint of the same size. Used as a receiver adapter.

Cat. No.	Top Outer Ⓢ Joint Size	Bottom Inner Ⓢ Joint Size	Qty/Pk	Qty/Cs
8940-24	24/40	24/40	1	12

8945 PYREX Brand, Connecting, 105° Angle, Two-Way, Vacuum Suction Tube, Ⓢ Joints

A receiver adapter, with a vacuum connection. The vacuum tube O.D. is 10 mm.

Cat. No.	Approx. Length (mm)	Ⓢ Inner and Outer Joint Size	Approx. Stem Length Below Ⓢ Joint (mm)	Qty/Pk	Qty/Cs
8945-24	295	24/40	170	1	6

8946 PYREX® Brand, Adapter, 105° Angle, Distilling, ⧩ Joints

With outer ⧩ joint at the top and an inner-sealed through drip-tip joint at the bottom. Bent at a 105° angle. The serrated sidearm is 10 mm O.D. Drip-tip at the bottom extends about 20 mm below the lower end of the joint.

Cat. No.	Approx. Length (mm)	⧩ Inner and Outer Joint Size	Qty/Pk	Qty/Cs
8946-24	175	24/40	1	6

8947 PYREX Brand, Adapter, Vacuum, Connecting, 105° Angle, ⧩ Joints

With tubulation of 10 mm O.D. for attaching to a vacuum pump or to inner and outer ⧩ joints. Includes a drip-tip on the inner tube.

Cat. No.	⧩ Inner and Outer Joint Size	Qty/Pk	Qty/Cs
8947-14	14/20	–	1
8947-19	19/22	1	6

*These tubes are also replacement parts for organic chemistry kits Cat. Nos. 6949-E, 6949G-2, and 6949K.

8950 PYREX Brand, Distilling, Adapter, 60° Angle, Three ⧩ Joints

Cat. No.	⧩ Inner and Outer Joint Size	Approx. Length (mm)	Qty/Cs
8950-24	24/40	206	1

*This tube is also a replacement part for organic chemistry kit Cat. No. 6949.

8980 PYREX Brand, Adapter, Connecting, ⧩ 10/30 Thermometer Opening, 75° Angle, Three-Way

The sidearm is at an angle approximately 75° from the lower joint. The lower end and sidearm are equipped with inner ⧩ 24/40 joints. The outer ⧩ 10/30 joint accommodates a thermometer.

Cat. No.	⧩ Top Outer Joint Size	⧩ Bottom Inner Joint Size	Approx. Length (mm)	Qty/Pk	Qty/Cs
8980-24	10/30	24/40	160	1	6

9000 PYREX Brand, Adapter, Connecting, 75° Angle, Three-Way, ⧩ Joints

The sidearm is at an angle approximately 75° from the lower joint. The lower end and sidearm are equipped with inner ⧩ joints, and the upper end with an outer ⧩ joint. All joints on each tube are of the same size.

Cat. No.	⧩ Inner and Outer Joint Size	Approx. Length (mm)	Qty/Pk	Qty/Cs
9000-14	14/20	105	–	1
9000-19	19/22	105	–	1
9000-24	24/40	160	1	6

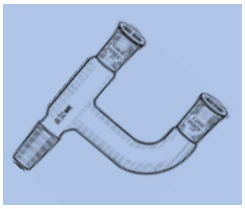
*These tubes are also replacement parts for organic chemistry kits Cat. Nos. 6949-E, 6949G-2, and 6949K.

9021 PYREX Brand, Adapter, Connecting, 120° Angle, Three-Way, ⧩ Joints

The sidearm is at an angle approximately 120° from the lower joint. Both outer and inner ⧩ joints are of the same size.

Cat. No.	⧩ Inner and Outer Joint Size	Approx. Length (mm)	Qty/Cs
9021-24 24/40	162	1	

*This tube is also a replacement part for organic chemistry kit Cat. No. 6949.



9040 PYREX® Brand, Connecting, Claisen type, Three-Way, Ⓢ Joints

With outer Ⓢ joints at the upper end and on the parallel sidearm. With inner Ⓢ joint at the lower end. All joints on each tube are of the same size.

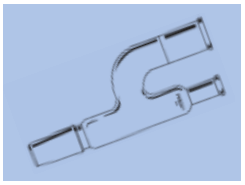
Cat. No.	Ⓢ Inner and Outer Joint Size	Approx. Length (mm)	Qty/Cs
9040-24	24/40	160	6

9050 PYREX Brand, Connecting, Claisen Type, Three-Way, Ⓢ Joints

A three-way tube with two outer and one inner joint of the same size.

Cat. No.	Ⓢ Inner and Outer Joint Size	Approx. Length (mm)	Qty/Cs
9050-14	14/20	125	1
9050-19	19/22	123	1

*This tube is also a replacement part for organic chemistry kits Cat. Nos. 6949-E, 6949G-2, and 6949K.



9057 PYREX Brand, Adapter, Thermometer, Offset

With Ⓢ outer joint on one end and Ⓢ inner joint on other end. Both Ⓢ joints are the same. The tubulation has a Ⓢ 10/30 outer joint for attaching a Ⓢ ground thermometer.

Cat. No.	Ⓢ Joint Size	Overall Height (mm)	Offset (mm)	Qty/Cs
9057-24	24/40	170	45	1
9057-29	29/42	170	50	1

9060 PYREX Brand, Connecting, Ⓢ 10/30 Thermometer Opening, Distilling, Three-Way, Ⓢ Joints

The sidearm is at an angle approximately 75° from the lower part of the vertical tube. The joint on the sidearm is at an angle approximately 105° from the sidearm. The sidearm and lower tube are equipped with inner Ⓢ joints of the same size. The upper tube is equipped with an outer Ⓢ 10/30 joint for a thermometer.

Cat. No.	Ⓢ Top Outer Joint Size	Ⓢ Bottom Inner Joint Size	Approx. Width (mm)	Qty/Pk	Qty/Cs
9060-24	10/30	24/40	200	1	6

9420 PYREX Brand, Distilling, Suction, Ⓢ Joints

For converting ordinary flasks with Ⓢ jointed necks to vacuum-type Ⓢ receivers. With an outer Ⓢ joint at the top and an inner Ⓢ joint of the same size at the bottom. The sidearm is approximately 10mm O.D. by 25 mm long.

Cat. No.	Ⓢ Inner and Outer Joint Size	Approx. Total Length (mm)	Qty/Pk	Qty/Cs
9420-24	24/40	137	1	6

*This tube is also a replacement part for organic chemistry kit Cat. No. 6949.

BEADS

7268 PYREX Brand, Solid Glass

Useful as packing for distillation columns, mixing beads and boiling stones. Beads are packaged in 0.45 kg. (1 lb.) packs, which have a packing volume of approximately 360 cm^3 or 22 cubic inches.

Cat. No.	Approx. Diam. (mm)	Avg. Count (Lb)	Diam. Tolerance (± mm)	Qty/Pk	Qty/Cs
7268-3	3	13,600	.75	1	4
7268-4	4	5,700	.75	1	4
7268-5	5	3,000	.75	1	4
7268-6	6	1,700	.75	1	4

BEAKERS

1000 PYREX® Brand, Griffin, Low Form, Double Scale, Graduated

Beaker, with spout, manufactured with uniform wall thickness, offers optimum balance between thermal shock resistance and mechanical strength. For convenience, the 250 through 4000 mL beakers have a double graduated metric scale to indicate approximate content. All sizes have an extra large marking spot. The 10 mL size is not graduated.

Cat. No.	Capacity (mL)	Graduation Range (mL)	Approx. O.D. x Height (mm)	Graduation Interval (mL)	Qty/Pk	Qty/Cs
1000-10	10	–	25 x 32	–	12	48
1000-20	20	5-15	32 x 40	5	12	48
1000-30	30	5-25	35 x 53	10	12	48
1000-50	50	10-40	42 x 56	10	12	48
1000-100	100	20-80	50 x 72	10	12	48
1000-150	150	20-140	57 x 86	10	12	48
1000-250	250	25-200	68 x 90	25	12	48
1000-400	400	25-325	77 x 110	25	12	48
1000-600	600	50-500	90 x 124	50	6	36
1000-800	800	50-750	98 x 135	50	6	24
1000-1L	1000	50-1000	108 x 158	50	6	24
1000-1XL	1500	200-1400	121 x 166	100	4	16
1000-2L	2000	200-1800	131 x 193	100	4	8
1000-3L	3000	250-2500	146 x 216	125	1	6
1000-4L	4000	500-3500	160 x 250	250	1	6
1000-PACK*	Assortment Pack				5	1 set

*A convenience pack containing one each of the most popular sizes of 1000 beaker. Designed for the low volume user, a case contains one each of five sizes; 50 mL, 100 mL, 250 mL, 600 mL and 1L. Packaged in a partitioned carton for safe transit and storage.
Reference: ASTM E-960.

1003 PYREX Brand, Griffin, Heavy Duty, Graduated

Heavy duty beakers specifically designed to offer the best mechanical strength under harsh conditions, such as mechanized washing operations. For convenience, the 250 through 4000 mL beakers have a double graduated metric scale to indicate their approximate content. All sizes have an extra large marking spot.

Cat. No.	Capacity (mL)	Graduation Range (mL)	Approx. O.D. x Height (mm)	Graduation Interval (mL)	Qty/Pk	Qty/Cs
1003-150	150	20-140	57 x 86	20	12	48
1003-250	250	25-200	68 x 90	25	12	48
1003-400	400	25-325	77 x 110	25	12	48
1003-600	600	50-500	90 x 124	50	6	36
1003-1L	1000	50-1000	108 x 156	50	6	24
1003-2L	2000	200-1800	131 x 180	200	4	8
1003-4L	4000	500-3500	160 x 250	250	1	4

Reference: ASTM E-960.

1010 PYREX Brand, Handle

A sturdy, molded glass handle is secured to this beaker by a stainless steel strap which fits into a recess in the beaker wall. Hot liquids can be handled easily and safely.

Cat. No.	Description	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
1010	Complete	3000	155 x 213	1	8
1010-BO	Beaker Only	3000	155 x 213	1	8

1060 PYREX® Brand, Berzelius, Tall Form, with Spout, Graduated

A tall beaker with spout to facilitate pouring. For convenience, these beakers are graduated to indicate their approximate content.

Cat. No.	Capacity (mL)	Grad. Range (mL)	Approx. O.D. x Height (mm)	Grad. Interval (mL)	Qty/Pk	Qty/Cs
1060-100	100	20-80	50 x 79	10	12	48
1060-200	200	25-150	56 x 102	25	12	48
1060-300	300	25-250	64 x 118	25	12	48
1060-400	400	25-325	69 x 127	25	6	36
1060-500	500	50-450	75 x 136	50	6	30
1060-600	600	50-550	79 x 152	50	6	24
1060-1L	1000	50-950	89 x 187	50	6	18

For beaker cover, See No. 9985.
Reference: ASTM E-960.

11000 VYCOR® Brand, Griffin, Low Form, Ungraduated

Beaker, with spout, made of Code No. 7913 glass (96% silica), which has high thermal and chemical resistance and is stable with acids, mild alkalies, water and steam, similar to fused quartz. It can be used at much higher temperatures (1200°C) than Cat. No. 7740 borosilicate glass and can withstand more thermal shock.

Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
11000-250	250	69 x 88	–	8
11000-400	400	77 x 107	1	6

6480 PYREX Brand, Beaker, Double Spout, Double Scale

Graduated in both fluid ounces and milliliters. The graduations are approximate only. These blown graduates, of substantial weight for greater mechanical strength, are ideal for measuring hot solutions. (Because of their heavy walls, they should not be subjected to direct contact with the heat source.)

Cat. No.	Capacity (mL)	Fl. Oz.	Approx. O.D. x Height (mm)	Grad. Interval (mL)	Qty/Pk	Qty/Cs
6480-125	125	4	56 x 102	5	1	12
6480-250	250	8	64 x 130	10	1	12
6480-500	500	16	78 x 172	25	1	12
6480-1L	1000	32	102 x 190	50	1	6
6480-2L	2000	64	117 x 265	50	1	6

BOTTLES

1220 PYREX Brand, Aspirator, Outlet for Tubing

A range of bottles featuring a tubular sidearm outlet to facilitate attachment of flexible tubing. Useful as a delivery/storage container for solutions.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. of Outlet (mm)	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
1220-250	250	2	10	70 x 132	6	18
1220-500	500	4	10	86 x 164	6	12
1220-1L	1000	6	10	107 x 200	1	6
1220-2L	2000	6	15	133 x 250	1	6
1220-4L	4000	10	13	165x 298	1	4
1220-2X	9500	12	13	187 x 476	–	1
1220-3X	13250	12	13	238 x 445	–	1
1220-5	19000	12	13	292 x 508	–	1

61220 PYREXPLUS® Brand, Aspirator, Protective Coating,* Outlet for Tubing

Bottle has a protective PVC coating for longer product life and safety. Protective coating helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. Bottle features a tubular sidearm outlet for attachment of flexible tubing. The tubulation is not coated to allow easy connection of standard size tubing.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. of Outlet (mm)	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
61220-250	250	2	10	70 x 132	–	6
61220-500	500	4	10	86 x 164	–	6
61220-1L	1000	6	10	107 x 200	1	4
61220-2L	2000	6	12.5	133 x 250	1	4
61220-4L	4000	10	12.5	165 x 298	–	1
61220-3X	13250	12	12.5	238 x 445	–	1

Do not place over direct heat or flame. Do not heat above 121°C moist heat or 110°; dry heat.
*Covered by U.S. Patent #4940613.

1260 PYREX® Brand, Centrifuge, Heavy Wall

For use where relatively small amounts of solids are involved. These bottles have a small bottom area, which permits concentration of sediment for decanting operations. Due to the heavy wall, the actual capacity is approximately 85% of the capacity listed.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
1260-250	250	6	60 x 143	–	12
1260-500	500	6	73 x 175	1	6

The 250 mL fits IEC #384, the 500 mL fits IEC #353.

1261 PYREX Brand, Centrifuge, Heavy Wall, Screw Cap

Particularly useful in handling sputum specimens. This bottle enables digestion, shaking, neutralizing and centrifuging to be performed in one container. The tight-fitting polypropylene screw cap with Teflon® liner reduces the possibility of aerosol escape.

Cat. No.	Capacity (mL)	Approx. Diam. x Height (mm)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
1261-200	200	60 x 141	38 x 400	1	12
1261-CO	–	Cap Only, White	38 x 400	–	1

1285 PYREX Brand, Blake Culture, Rectangular

This bottle is convenient for growing mass cultures. Made with tool-finished neck for increased strength and uniform stopper fit. Will withstand repeated sterilization (wet or dry).

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Cross Section (mm)	Approx. Height (mm)	Qty/Cs
1285-1L	1000	6	64 x 95	271	1

1290 PYREX Brand, Roux Culture, Offset Neck

This bottle is designed so that when laid flat, it will hold approximately one-half of the stated capacity of solution. Offset neck is tool-finished for increased strength and uniform stopper fit. It is useful for growing mass cultures and single or monolayer cultures. Will withstand repeated sterilization (wet or dry). Bottle stacks for easy storage.

Cat. No.	Capacity (mL)	Approx. Cross Section (mm)	Approx. Height (mm)	Qty/Cs
1290-1L	1000	57 x 122	269	18

1295 PYREX® Brand, Povitsky, Diphtheria Toxin

These rectangular bottles are designed for general tissue culture work or preparation of diphtheria toxin. Offset tooled neck has increased strength and uniform stopper fit. Will withstand repeated sterilization (wet or dry). Designed by Dr. Olga R. Povitsky.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Cross Section (mm)	Approx. Height (mm)	Qty/Cs
1295-2L	2000	6	89 x 114	327	1
1295-5L	5000	10	114 x 152	467	4

1340 PYREX Brand, Dropping, Bulb and Pipet, Glass Stopper

Recommended for use where preventing contamination by solubility or pH change is important. Stopper is not covered by ⅀ specifications, but ground to an interchangeable 1:10 taper. Pipet capacities are .25, .5, and 1.0 mL respectively.

Cat. No.	Description	Capacity (mL)	Approx. Diam. x Height w Stopper (mm)	Qty/Cs
1340-30	Complete	30	35 x 110	12
1340-125	Complete	125	55 x 150	12
1340-30PO	Pipet w/Bulb Only	.25	–	1
1340-60PO	Pipet w/Bulb Only	.5	–	1
1340-125PO	Pipet w/Bulb Only	1.0	–	1

Reference: ASTM D-281.

1350 PYREX Brand, Hypering, Graduated

Graduated in 25 mL approximate divisions which can be read from the top or bottom.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Dia. x Height (mm)	Qty/Cs
1350-2L	2000	10	119 x 296	1

1367 CORNING® Brand, Milk Dilution, Screw Cap

Narrow mouth bottle for general storage of solutions and tissue culture work. Phenolic cap with rubber liner will withstand sterilization (wet at 121°C). Meets the requirements for milk dilution bottles stated in the *Standard Methods for the Examination of Dairy Products*, published by the American Public Health Association.

Cat. No.	Capacity (mL)	Approx. Cross Section (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
1367-160	160	44 x 44	150	12	48

For cap only, see Cat. No. 9999-28 size G.P.I. No. 28-400.

1368 CORNING Brand, Milk Dilution, Wide Mouth, Screw Cap

Wide mouth bottle (approximately 28 mm opening) to facilitate addition of dry solids or liquids. Phenolic cap with rubber liner will withstand sterilization (wet at 121°C). Meets the requirements for milk dilution bottles stated in the *Standard Methods for the Examination of Dairy Products*," published by the American Public Health Association.

Cat. No.	Capacity (mL)	Approx. Cross Section (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
1368-160	160	44 x 44	150	12	48

For cap only, see Cat. No. 9999-40, size G.P.I. No. 40-400.

1372 CORNING Brand, Milk Dilution, Screw Cap, Graduated

Narrow mouth bottle with a cut-line graduation mark at 99 ±1 mL. Phenolic cap with rubber liner will withstand sterilization (wet at 121°C). Meets the requirements for milk dilution bottles stated in the *Standard Methods for the Examination of Dairy Products*, published by the American Public Health Association.

Cat. No.	Capacity (mL)	Approx. Cross Section (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
1372-160	160	44 x 44	150	12	48

For cap only, See No. 9999-28, G.P.I. No. 28-400.

1373 CORNING® Brand, Milk Dilution, Wide Mouth, Screw Cap, Graduated

Wide mouth bottle for easy measuring or filling. With cut-line graduation mark at 99 ±1 mL. Phenolic cap with rubber liner will withstand sterilization (wet at 121°C).

Cat. No.	Capacity (mL)	Approx. Cross Section (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
1373-160	160	44 x 44	150	12	48

For cap only, see Cat. No. 9999-40, G.P.I. No. 40-400.

1395 PYREX® Brand, Media, Storage, Screw Cap

Heavy duty bottle which can be used for storage as well as mixing and sampling. Includes liner-less, one-piece autoclavable polypropylene plug seal cap with drip free pouring rings. Optional red PBT caps and red ETFE pouring rings are available for dry heat sterilization (180°C). Glass bead indicates full capacity line on 100 mL through 2 liter size. Bottles have permanent white enamel graduations and marking spots. Color-coded polypropylene caps in a choice of orange, green, purple, red, and light gray are available.

Cat. No.	Description	Capacity (mL)	Thread Finish	Approx. Diameter x Height (mm)	Grad. Range (mL)	Grad. Interval (mL)	Qty/ Cs
1395-25	Storage Bottle	25	GL25	36.5 x 70	10-25	5	10
1395-50	Storage Bottle	50	GL32	46 x 88	20-50	10	10
1395-100	Storage Bottle	100	GL45	56 x 100	40-80	20	10
1395-250	Storage Bottle	250	GL45	70 x 138	50-200	50	10
1395-500	Storage Bottle	500	GL45	86 x 176	100-400	100	10
1395-1L	Storage Bottle	1000	GL45	101 x 225	100-900	100	10
1395-2L	Storage Bottle	2000	GL45	136 x 262	400-1800	200	10
1395-5L	Storage Bottle	5000	GL45	186 x 335	500-4500	500	1
1395-10L	Storage Bottle	10000	GL45	234 x 410	2000-9000	1000	1
1395-32LTC	Orange Cap	–	GL32	–	–	–	20
1395-32LTR	Clear Ring	–	GL32	–	–	–	50
1395-32HTC	Red Cap, High Temp	–	GL32	–	–	–	10

PYREX Brand, Storage Bottle Screw Caps

Cat. No.	Description	Thread Finish	Qty/Cs
1395-45LTC	Orange Cap	GL45	20
1395-45LTR	Clear Ring	GL45	50
1395-45HTR	Red Ring, High Temp	GL45	50
1395-45LTC1	Purple Cap	GL45	20
1395-45LTC2	Light Gray Cap	GL45	20
1395-45LTC3	Green Cap	GL45	20
1395-45LTMC	Gray Membrane Cap	GL45	10
1395-25HTSC	Cap, Open Top, PBT, High Temp	GL25	10
1395-32HTSC	Cap, Open Top, PBT, High Temp	GL32	10
1395-45HTSC	Cap, Open Top, PBT, High Temp	GL45	10
1395-25SS	Septa, Silicone	GL25	10
1395-32SS	Septa, Silicone	GL32	10
1395-45SS	Septa, Silicone	GL45	10
1395-25TS	Septa, PTFE Faced Silicone	GL25	10
1395-32TS	Septa, PTFE Faced Silicone	GL32	10
1395-45TS	Septa, PTFE Faced Silicone	GL45	10
1397-80LTC	Orange Wide Mouth Cap	GLS80	20

Caution: Bottles larger than 2L should NOT be used with bottle top filter units, or in other applications involving vacuum pressure, as breakage may occur. DO NOT have caps tightened mmediately after autoclaving as the vacuum resulting from cooling can cause breakage. A pouring ring is not included on 25 mL size. A vented cap is NOT recommended for use on the 5L and 10L 1395 bottle.

51395 PYREX® Brand, Low Actinic Bottle, Media, Storage, Graduated, Screw Cap

Heavy duty bottle of low actinic glass for use when storing/transporting light sensitive materials. Includes a linerless, one-piece, autoclavable, orange polypropylene, plug-seal cap with drip-free pouring rings. Glass bead indicates full capacity line. Permanent white enamel graduations and marking spots.Thread size: GL45. Neck I.D.: 29 mm I.D.

Cat. No.	Capacity (mL)	Diameter x Height (mm)	Approx. Grad. Range (mL)	Grad. Interval (mL)	Qty/Cs
51395-100	100	56 x 100	40-80	20	4
51395-250	250	70 x 138	50-200	50	4
51395-500	500	86 x 176	100-400	100	4
51395-1L	1000	101 x 225	100-900	100	4
51395-2L	2000	136 x 262	400-1800	200	10
51395-5L	5000	186 x 335	500-4500	500	1
51395-10L	10000	234 x 410	2000-9000	1000	1

Replacement caps and pouring rings are available under Cat. No. 1395 series.

1396 PYREX Brand, Media Storage, Screw Cap, Graduated, Square

Manufactured from PYREX borosilicate glass for chemical and thermal resistance. Square bottles are easier to handle, require less space (13-20%) on the shelf or in the autoclave and are ideal for mixing, sampling and storage. Features include white enamel graduations, large marking spot and a glass ridge molded into the bottle to indicate full capacity. Includes linerless, one-piece, autoclavable, orange, polypropylene plug seal cap with drip-free pouring ring. A wide range of optional caps are available under the catalog series 1395.

Cat. No.	Description	Cap. (mL)	Thread Finish	Approx. Dimensions Width x Hgt. (mm)	Grad. Range (mL)	Grad. Interval (mL)	Qty/Cs
1396-100*	Square Storage Bottle	100	GL32	50 x 105	40-80	20	10
1396-250*	Square Storage Bottle	250	GL45	64 x 138	50-200	50	10
1396-500*	Square Storage Bottle	500	GL45	78 x 176	100-400	100	10
1396-1L*	Square Storage Bottle	1000	GL45	94 x 217	100-900	100	10
1395-25HT	Cap, Open Top, PBT, High Temp	–	GL25	–	–	–	10
1395-32HT	Cap, Open Top, PBT, High Temp	–	GL32	–	–	–	10
1395-45HT	Cap, Open Top, PBT, High Temp	–	GL45	–	–	–	10
1395-25SS	Septa, Silicone	–	GL25	–	–	–	10
1395-32SS	Septa, Silicone	–	GL32	–	–	–	10
1395-45SS	Septa, Silicone	–	GL45	–	–	–	10
1395-25TS	Septa, PTFE Faced Silicone	–	GL25	–	–	–	10
1395-32TS	Septa, PTFE Faced Silicone	–	GL32	–	–	–	10
1395-45TS	Septa, PTFE Faced Silicone	–	GL45	–	–	–	10

*Do NOT have caps tightened immediately after autoclaving as the vacuum resulting from cooling can cause breakage. Not applicable for vacuum use.

1397 PYREX Brand, Round Wide Mouth Media Storage Bottles with GLS 80 Screw Cap

These PYREX wide mouth bottles are designed for heavy duty storage as well as mixing and sampling. The extra-wide mouth (69 mm inner diameter) gives easier access for pouring and removing pastes, powders and larger items. They include a linerless, one-piece autoclavable orange polypropylene plug seal GLS80-threaded cap with a drip-free pouring ring. The neck opening is 5 times larger than on GL45-threaded bottles and is much easier to add or remove powders and to clean.

Cat. No.	Capacity (mL)	Thread Size	Approx. Diameter x Height (mm)	Grad. Range (mL)	Grad. Interval (mL)	Qty/Cs
1397-500	500	GLS80	101 x 148	100-500	100	10
1397-1L	1000	GLS80	101 x 218	100-1000	100	10
1397-2L	2000	GLS80	136 x 248	400-2000	200	10

1400 PYREX® Brand, Roller Bottle with 38 mm Screw Cap

Manufactured from borosilicate glass for optical clarity and mechanical strength. Can withstand repeated wet or dry sterilization. Supplied with 38 mm deep skirted rubber-lined phenolic screw cap.

Cat. No.	Description	Cell Growth Area (cm^2)	Dimensions O.D. x Height (mm)	Qty/Cs
1400-285	Roller Bottle	840	110 x 285	2
1400-440	Roller Bottle	1170	110 x 440	2
1400-490	Roller Bottle	1330	110 x 490	2
1400-570	Roller Bottle	1585	110 x 570	2
1400-CAP	Cap, Phenolic G.P.I. 38-430	–	–	1

1450 PYREX Brand, Roller Bottle with 51 mm Screw Cap

Manufactured from borosilicate glass for optical clarity and mechnical strength. Can withstand repeated wet or dry sterilization. Wide mouth simplifies cell harvesting. Supplied with phenolic, rubber-lined cap.

Cat. No.	Description	Cell Growth Area (cm^2)	Dimensions O.D. x Height (mm)	Qty/Cs
1450-270	Roller Bottle	670	110 x 270	2
1450-475	Roller Bottle	1330	110 x 475	2
1450-570	Roller Bottle	1585	110 x 570	2
1450-CAP	Cap, Phenolic G.P.I. 51-400	–	–	1

1500 PYREX Brand, Reagent, Narrow Mouth, PYREX ⅋ Stopper

With neck ground and furnished with ⅋ stopper.

Cat. No.	Description	Capacity (mL)	⅋ Stopper No.	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
1500-125	Complete	125	19	55 x 136	6	48
1500-250	Complete	250	19	70 x 160	1	36
1500-500	Complete	500	24	86 x 198	1	24
1500-1L	Complete	1000	29	107 x 235	1	24
1500-2L	Complete	2000	29	133 x 282	1	6

For stopper only, see Cat. No. 7575.

61500 PYREXPLUS® Brand, Reagent, Narrow Mouth, Protective Coating* PYREX ⅋ Stopper

Features a protective PVC coating for longer product life and safety. Protective coating helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. Bottle has a ground neck with a ⅋ stopper.

Cat. No.	Description	Capacity (mL)	⅋ Stopper No.	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
61500-125	Complete	125	19	55 x 136	6	12
61500-250	Complete	250	19	70 x 160	1	6
61500-500	Complete	500	24	86 x 198	1	6
61500-1L	Complete	1000	29	107 x 235	1	6
61500-2L	Complete	2000	29	133 x 282	–	1

For stopper only, see Cat. No. 7575.
Do not place over direct heat or flame. Do not heat above 121°C moist heat or 110°C dry heat.
Not recommended for dry heat sterilization. Will melt.
*Covered by U.S. Patent #4940613.

1580 PYREX® Brand, Reagent, Wide Mouth, Stopper

This wide mouth bottle is supplied with an improved stopper. Meets A.P.H.A. requirements for a water sample bottle. Not covered by $ specifications, but stopper is ground to an interchangeable 1:10 taper approximately 12.7 mm (½") in length.

Cat. No.	Description	Capacity (mL)	Stopper No.	Approx. Dia. x Height (mm)	Qty/Pk	Qty/Cs
1580-125	Complete	125	29	57 x 142	12	24

1585 PYREX Brand, Serum

Designed especially for handling and storing sterile culture media and sera where stability of the glass is of prime importance. Also suitable for storing distilled water and standard solutions. Will withstand hot air (dry) or steam (wet) sterilization. Necks are tooled to increase mechanical strength and for uniform stopper fit.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Diam. x Height (mm)	Qty/Cs
1585-4L	4000	8	165 x 278	8
1585-9L	9000	8	203 x 408	4

1595 PYREX Brand, Solution

These bottles are designed for storage of solutions and are ideal for media preparation. The 9.5 liter (2½ gallon) and 13.25 liter (3½ gallon) sizes are in a conventional bottle shape. The 19 liter (5 gallon) and 45.5 liter (12 gallon) sizes are similar in design to a carboy. The 19 liter size is weight controlled to 15 lbs. maximum for ease of handling. The necks are tooled to increase mechanical strength and for uniform stopper fit.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Diam. x Height (mm)	Qty/Cs
1595-2X	9500	12	187 x 470	4
1595-3X	13250	12	238 x 445	4
1595-5	19000	12	292 x 508	1
1595-12	45500	12	406 x 584	1

51595 PYREX Brand, Solution Bottle, Low Actinic

These bottles are designed for storage of solutions and are ideal for media preparation. They are made from low actinic glass to protect light sensitive materials. The 9.5 liter (2.5 gallon) and the 13.25 liter (3.5 gallon) sizes are in a conventional bottle shape. The 19.5 liter (5 gallon) and 45.5 liter (12 gallon) sizes are similar in design to a carboy. The 19.5 liter size is weight controlled to 15 pounds maximum for ease of handling. The necks are tooled to increase mechanical strength and for uniform stopper fit.

Cat No.	Capacity (mL)	Rubber Stopper No.	Approx. Dia. x Height (mm)	Qty/Cs
51595-12	45500	12	406 x 584	1
51595-2X	9500	12	187 x 470	1
51595-3X	13250	12	238 x 445	1
51595-5	19000	12	292 x 508	1

1596 PYREX® Brand, Solution, Graduated, Carboy

With double scale (liters and gallons) black enamel graduations. Graduated in 500 mL increments.

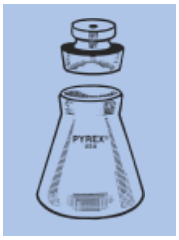
Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Diam. x Height (mm)	Qty/Cs
1596-9L	9500	12	187 x 476	4
1596-13L	13250	12	238 x 438	4
1596-19L	19000	12	292 x 508	1

61596 PYREXPLUS® Brand, Solution, Protective Coating,* Graduated, Carboy

Bottle features a protective PVC coating for longer product life and safety. Protective coating helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. Designed for storage of solutions, ideal for media preparation. The 9L and 13L sizes are in conventional bottle shape. The 19L size is similar in design to a carboy. Necks are tooled to increase mechanical strength and for uniform stopper fit. Graduated in 500 mL increments with black enamel.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
61596-9L	9500	12	187 x 476	–	1
61596-13L	13250	12	238 x 438	–	1
61596-19L	19000	12	292 x 508	–	1

Do not place over direct heat or flame. Do not heat above 121°C moist heat or 110°C dry heat.
*Covered by U.S. Patent #4940613.



1620 PYREX Brand, Hubbard-Carmick, Specific Gravity

Use with viscous fluids, semi-solid bitumens and emulsions.

Cat. No.	Capacity (mL)	Stopper Size	Approx. Diam. x Height (mm)	Qty/Cs
1620-25	25	24/12	40 x 57	12

Reference: ASTM Test D-70, D-1429 and D-115.

1622 PYREX Brand, Gay Lussac Bottle, Specific Gravity

Unadjusted for calibration in the laboratory.

Cat. No.	Capacity (mL)	Approx. Dia. x Height without Stopper	Qty/Cs
1622-2	2	17 x 32	1
1622-5	5	19 x 39	1

61626 PYREXPLUS Brand Bottles, Media, Storage, Screw Cap

Heavy duty bottle which can be used for storage as well as mixing and sampling. A protective PVC coating* helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. Bottle comes complete with autoclavable, one-piece, green colored, polypropylene plug seal cap with drip-free pouring ring. Glass bead indicates full capacity line. Teal enameled graduations and marking spot. Thread size: GL45. Neck opening: 29 mm I.D.

Cat No	Capacity (mL)	Approx. Diameter x Height (mm)	Grad. Range (mL)	Grad. Interval (mL)	Qty/Cs
61626-100	100	56 x 100	40 –80	20	4
61626-250	250	70 x 138	50-200	50	4
61626-500	500	86 x 176	100-400	100	4
61626-1L	1000	101 x 225	100-900	100	4
61626-2L	2000	136 x 262	400-1800	200	4

*Covered by U.S. Patent #4940613.

1680 PYREX® Brand, Weighing, Tall, Short Length ⅋ Joints

Tall form bottle with a ST joint style opening that accepts a closed bottom, hollow pennyhead style stopper.

Cat. No.	Approx. Capacity (mL)	Approx. Weight (g)	⅋ Joint	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
1680-1550	7	9	14/10	15 x 50	6	24
1680-1580	12	13	14/10	15 x 80	–	6
1680-2540	12	18	24/12	25 x 40	6	24
1680-2550	16	21	24/12	25 x 50	6	24
1680-3060	30	30	29/12	30 x 60	6	18
1680-4050	45	52	40/12	40 x 50	6	12
1680-4080	70	67	40/12	40 x 80	6	12
1680-5060	85	78	50/12	50 x 60	–	6

1682 PYREX Brand, Weighing, Low Form, Short Length ⅋ Joints

Low form bottle with a ST joint style opening that accepts a closed bottom hollow Pennyhead style stopper.

Cat. No.	Approx. Capacity (mL)	Approx. Weight (g)	⅋ Joint	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
1682-5030	35	53	50/12	50 x 30	2	6
1682-6030	50	71	60/12	60 x 30	2	6
1682-7033	82	111	71/15	70 x 33	2	6

1684 PYREX Brand, Weighing, PARR, Short Length External ⅋ Joints

Joints Designed for use in weighing small samples. The closure style cap fits over the externally ground body.

Cat. No.	Approx. Capacity (mL)	Approx. Weight (g)	⅋ Joint	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
1684-2024	4	12	24/12	20 x 24	6	12

1686 PYREX Brand, Weighing, Regular, Short Length External ⅋ Joints

Standard form bottle with a closure that fits over the external ground body.

Cat. No.	Approx. Capacity (mL)	Approx. Weight (g)	⅋ Joint	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
1686-2540	12	20	29/12	25 x 40	6	18
1686-2550	16	25	29/12	25 x 50	6	18
1686-3060	30	32	34/12	30 x 60	6	18
1686-4050	45	55	45/12	40 x 50	6	12
1686-4080	70	72	45/12	40 x 60	6	12
1686-40100	92	83	45/12	40 x 100	6	12

1688 PYREX Brand, Weighing, Low Form, Short Length External ⅋ Joints

Low form bottle like the 1682 bottles but with a closure that fits over the external ground body.

Cat. No.	Approx. Capacity (mL)	Approx. Weight (g)	⅋ Joint	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
1688-5030	36	68	55/12	50 x 30	–	2
1688-6030	42	73	60/12	60 x 30	–	2

7732 PYREX® Brand, Bomb, Gum Stability

For the determination of gum stability of gasoline. The cover prevents condensed vapors in bomb stem from contaminating the sample, but does not interfere with free flow of oxygen. Made in accordance with ASTM D-525.

Cat. No.	Description	Approx. O.D. x Height (mm)	Qty/Cs
7732	Complete	50 x 105	1
7732-CO	Cover Only	–	1

7735 PYREX Brand, Ramsbottom, Bulb, Carbon Residue

Used in determining carbon residue in petroleum products.Reference: ASTM D-524.

Cat. No.	Approx. O.D. x Body Length (mm)	Stem O.D. (mm)	Qty/Pk	Qty/Cs
7735-24	24 x 57	8	12	24

GAS WASHING BOTTLES

31750 PYREX Brand, Gas Washing, Side Inlet, Fritted Disc, ⅋ Stopper

The side tube on this bottle has a rod sealed to the bottle near the top for extra strength. Tubulation O.D. is 10 mm. The large diameter fritted disc permits the handling of large volumes of gas.

Cat. No.	Description	Capacity (mL) and Porosity	⅋ Stopper Size	Dia. of Disc (mm)	Approx. O.D. x Height (mm)	Qty/Cs
31750-350C	Complete	350 C	24/40	60	70 x 285	1

1760 PYREX Brand, Gas Washing, Tall Form, ⅋ Stopper

The ⅋ stopper incorporates a plain tip tube as the distributor. These bottles have large hexagonal bases for stability. Tubulations are 10 mm O.D.

Cat. No.	Description	Capacity (mL)	⅋ Stopper Size	Approx. Height (mm)	Qty/Cs
1760-125	Complete	125	29/42	335	1
1760-250	Complete	250	29/42	340	1
1760-500	Complete	500	29/42	390	1

31760 PYREX Brand, Gas Washing, Tall Form, Fritted Disc, ⅋ Stopper

These bottles have a large hexagonal base for stability. The fritted disc provides greater efficiency and more uniform dispersion of gas bubbles for complete absorption. Tubulation O.D.'s are 8mm.

Cat. No.	Description	Capacity (mL) and Porosity	⅋ Stopper Size	Diam. of Disc (mm)	Approx. O.D. x Height (mm)	Qty/Cs
31760-125EC	Complete	125 EC	40/50	20	38 x 300	1
31760-125C	Complete	125 C	40/50	20	38 x 300	1
31760-250EC	Complete	250 EC	40/50	20	51 x 305	1
31760-250C	Complete	250 C	40/50	20	51 x 305	1
31760-500EC	Complete	500 EC	40/50	20	64 x 350	1
31760-500C	Complete	500 C	40/50	20	64 x 350	1
31760-500BO	Bottle Only	500	–	1	–	1
31760-500ECSO	Stopper Only	500 EC	–	1	–	1
31760-500CSO	Stopper Only	500 C	–	1	–	1

31770 PYREX® Brand, Gas Washing, Tall Form, Fritted Cylinder, ⅀ Stopper

Stopper is equipped with a 12 mm diameter fritted cylinder instead of a disc as the distributor.

Cat. No.	Description	Capacity (mL) and Porosity	⅀ Stopper Size	Approx. O.D. x Height (mm)	Qty/Cs
31770-125EC	Complete	125 EC	29/42	38 x 298	1
31770-125C	Complete	125 C	29/42	38 x 298	1
31770-250EC	Complete	250 EC	29/42	51 x 290	1
31770-250C	Complete	250 C	29/42	51 x 290	1
31770-500EC	Complete	500 EC	29/42	63 x 340	1
31770-500C	Complete	500 C	29/42	63 x 340	1

1900 PYREX Brand, Nesbitt, Absorption, Stopper

For the absorption of CO_2 in carbon determination. Weight, when filled, is approximately 135 grams. A turn of the interchangeable stopper closes both inlet and outlet tubes.

Cat. No.	Approx. Height (mm)	Inlet/Outlet Tube O.D. (mm)	Qty/Pk	Qty/Cs
1900-165	150	6	1	2

BULBS

1980 PYREX Brand, Kjeldahl, Connecting Bulb Type

These bulbs have a curved inner tube sealed to the upper arm.

Cat. No.	Dia. of Bulb (mm)	Approx. Upper Tube Size (mm)	Approx. Lower Tube Size (mm)	Qty/Pk	Qty/Cs
1980-48	48	12	9	4	12
1980-65	65	12	9	4	12

2040 PYREX Brand, Kjeldahl, Connecting, Iowa State Type

A low price trap (patented), designed to replace previously accepted types. A square glass plate, sealed at the corners in the lower part of the cylindrical bulb, acts as an efficient baffle. Comparative tests show this trap to be as efficient as the more expensive type with two bent inner tubes; in addition, this trap drains completely. The large bottom tube facilitates the return of any condensate to the flask.

Cat. No.	Approx. Upper Tube Size (mm)	Approx. Lower Tube Size (mm)	Qty /Pk	Qty/Cs
2040	12	12	2	24

BURETS

2094 PYREX Brand, Colored Scale, Dispensing, Straight Bore Teflon® Stopcock Plug

Used when dispensing large volumes of liquids rapidly and accurately. Made from close tolerance, accurate bore tubing with uniform walls, these burets have a permanently colored scale. Tips are carefully drawn and ground to reduce chipping. Provided with a Teflon stopcock plug to reduce freezing and eliminate lubricant contamination. The smooth micro-finish of the stopcock barrel assures a precision fit and optimum leak-resistant performance.

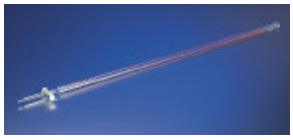
Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. ± (mL)	Approx. O.D. x Height (mm)	Stopcock Bore (mm)	Qty/Cs
2094-250	250	1	2.0	33 x 550	4	1
2094-500	500	5	2.5	41 x 675	4	1
2094-1L	1000	10	5.0	50 x 810	6	1

2103 PYREX® Brand, Colored Scale, Class A, Teflon Stopcock Plug

The capacity tolerance on these burets is established by ASTM E-287 and they are calibrated in accordance with ASTM E-542. Tips are carefully drawn from accurate bore tubing to insure proper drainage rates. This buret has colored markings, fine, sharp lines and large easy-to-read numbers. The stopcock barrel has a smooth micro-finish to assure leak-resistant performance. Each buret is supplied with a dust cover. All sizes are furnished with a 2 mm bore stopcock plug.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. ± (mL)	Approx. O.D. x Height (mm)	Qty/Cs
2103-10	10	.05	.02	9 x 560	1
2103-25	25	.10	.03	12 x 560	1
2103-50	50	.10	.05	14 x 750	1
2103-100	100	.20	.10	18 x 752	1

2105 PYREX Brand, Serialized/Certified Class A, Colored Scale Teflon Stopcock Plug



Calibrated to Class A tolerances in accordance with ASTM D-511, E-542, and ASTM E-287. Each buret is individually serialized and supplied with a Certificate of Identification and Capacity, traceable to NIST standards. This buret has colored markings with fine, sharp lines and large easy-to-read numbers. Each buret is supplied with a dust cover. All sizes are furnished with a 2 mm bores stopcock plug.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tolerance (± mL)	Approx. O.D. x Height (mm)	Qty/Cs
2105-10	10	.05	.02	9 x 560	1
2105-25	25	.10	.03	12 x 560	1
2105-50	50	.10	.05	14 x 750	1
2105-100	100	.20	.10	18 x 752	1

2110 PYREX Brand, Rotaflo®, Dual Plug, White Enamel Markings, with Rotaflo Stopcock

Buret with automatic zero, Rotaflo dual stopcock. The dual stopcock helps eliminate titration errors.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	GP Plug	Qty/Cs
2110-25	25	.10	.06	12 x 560	3	1
2110-50	50	.10	.10	14 x 760	3	1

2111 PYREX Brand, Single Plug, White Enamel Markings with a Rotaflo Stopcock, Automatic Zero

A straight bore buret suitable for use in schools and institutional laboratories, featuring easy-to-read, wear resistant white enamel markings and the one piece, greaseless Rotaflo stopcock in a 3 mm bore.

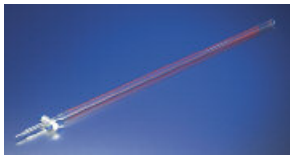
Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	GP Plug	Qty/Cs
2111-25	25	.10	0.06	12 x 575	3	1
2111-50	50	.10	0.10	14 x 765	3	1

2116 PYREX® Brand, Economy Grade, Teflon® Locking Stopcock

An economical buret designed to reduce replacement costs by providing replaceable components. These sturdy, durable burets have tooled tops and bottoms and white enamel graduations. The screw thread locking Teflon stopcock with ground tip is compatible with Cat. No. 2116 existing buret bodies. Simply replace the stopcock assembly to benefit from the improved design.The new replaceable stopcock assembly features a screw thread locking nut and collar which ensures that the stopcock cannot fall out in use. The 2116-GTO replaceable tip has a ground end which provides a better grip and helps prevent the tip from falling out.

Cat. No.	Description	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/ Pk	Qty/ Cs
2116-25	Complete	25	.10	.06	14 x 450	2	6
2116-50	Complete	50	.10	.10	14 x 740	2	6
2116-25BO	Body Only	25	.10	.06	–	2	6
2116-50BO	Body Only	50	.10	.10	–	2	6
2116-GTO	Tip Only with Ground End (for use with 2116-LSO only)	–	–	–	–	–	12
2116-LSO	Locking Stopcock Only	–	–	–	–	–	1
2116-TO	Tip Only (for use with 2145-SO only)	–	–	–	–	–	12

2122A PYREX Brand, Colored Scale, Straight Bore Teflon Stopcock



Burets are suitable for use in school and institutional laboratories not requiring the accuracy of our Class A models. Supplied with a Teflon stopcock plug. The microfinish of the barrel provides a precision fit. The tips are carefully drawn for accuracy to insure proper drainage rate. Each buret is supplied with a dust cover. All sizes furnished with a 2 mm bore stopcock plug. This buret has durable colored markings.

Cat. No.	Description	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Stopcock	Qty/Cs
2122A-10	Complete	10	.05	.04	9 x 560	2	1
2122A-25	Complete	25	.10	.06	12 x 560	2	1
2122A-50	Complete	50	.10	.10	14 x 750	2	1
2122A-100	Complete	100	.20	.20	18 x 752	2	1

2128 PYREX Brand, Micro, Precision Bore, Funnel Top, Class A, Straight ⅋ Stopcock, White Enamel Markings

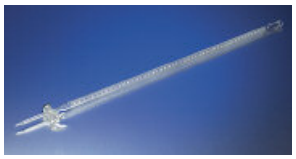
These burets are designed for precise analytical methods in microchemistry. Precision bore tubing throughout the body assures accuracy between any two points. Funnel top facilitates addition of reagents by pouring, or by suction from below, through a rubber-stoppered tube. Tips are tapered to assure smooth flow. Stopcocks turn freely, yet give positive control and are of 2 mm bore.The capacity tolerance on these burets is established by ASTM E-1189 and are calibrated in accordance with ASTM E-542.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Stopcock Bore (mm)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
2128-5	5	.01	.01	2	7 x 735	1	2
2128-10	10	.02	.02	2	8 x 735	1	2

2130 PYREX® Brand, Precision Bore, Class A, Straight Bore ⅀ Stopcock, Colored Markings

Precision bore tubing is used to assure accuracy between any two points. Durable colored graduations are sharply defined and easy to read. Carefully ground ⅀ stopcock gives precise control. Each buret is supplied with a dust cover. All sizes furnished with a 2 mm bore stopcock plug. The capacity tolerance on these burets is established by ASTM E-287 and they are calibrated in accordance with ASTM E542.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Stopcock Bore (mm)	Qty/Cs
2130-10	10	.05	.02	9 x 565	2	1
2130-25	25	.10	.03	12 x 565	2	1
2130-50	50	.10	.05	14 x 755	2	1
2130-100	100	.20	.10	18 x 755	2	1

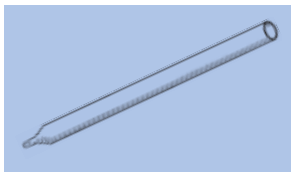


2135 PYREX Brand, Serialized/Certified, Class A, Precision Bore, Straight ⅀ Stopcock

Precision bore tubing is used to assure accuracy between any two points. Manufactured to Class A tolerances in accordance with ASTM E-542 and ASTM E-287. Each buret is individually serialized and supplied with a Certificate of Identification and Capacity, traceable to NIST standards. Durable white graduations are sharply defined and easy to read. Carefully ground ⅀ stopcock gives precise control Each buret is supplied with a dust cover. All sizes furnished with a 2 mm bore stopcock plug.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Stopcock Bore (mm)	Qty/Cs
2135-10	10	.05	.02	9 x 560	2	1
2135-25	25	.10	.03	12 x 560	2	1
2135-50	50	.10	.05	14 x 750	2	1
2135-100	100	.20	.10	18 x 752	2	1

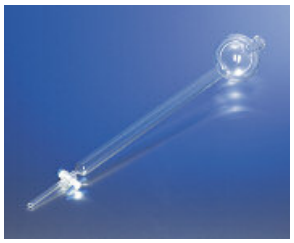
COLUMNS



2142 Disposable Cleanup/Drying Chromatography Columns

These disposable PYREX® glass columns can be used for alumina, silica gel, or Florisil® cleanup of sample extracts, or for sodium sulfate drying of samples. Being disposable, there is less chance of sample cross-contamination and there is no wasted time or added costs associated with cleaning reusable columns.

Cat. No.	Description	Size (mL)	O.D. x I.D. x Height (mm)	Qty/Cs
2142-10	Column, Disposable Cleanup/Drying	10	10.9 x 8.6 x 290	200
2142-25	Column, Disposable Cleanup/Drying	25	15.8 x 14.0 x 297	100
2142-50	Column, Disposable Cleanup/Drying	50	18.0 x 16.2 x 300	50



2146 PYREX Brand, Chromatographic Column with Reservoir, Teflon® Stopcock

Reservoir at top with ⅀ 2 mm bore Teflon® plug.

Cat. No.	Description	Reservoir Capacity (mL)	Approx. Column O.D. x Height (mm)	Qty/Cs
2146-10	Column	200	13 x 250	1
2146-14	Column	250	17 x 250	1
2146-19	Column	250	22 x 300	1
2146-22	Column	300	25 x 350	1
2146-29	Column	500	32 x 400	1

2147 PYREX® Brand, Flash Chromatography Flow Controller

Standard controller consists of a bottom joint ⅋ 35/20 and a top valve 0-4 mm.

Cat. No.	Description	Approx. Height (mm)	Qty/Cs
2147-FC	Flow Controller	85	1

2148 PYREX Brand, Flash Chromatography Reservoir

Reservoir can be used between column and flow controller. Top socket joint and bottom ball joint are ⅋ 35/20.

Cat. No.	Description	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Cs
2148-250	Reservoir	250	81 x 171	1
2148-500	Reservoir	500	98 x 188	1
2148-1L	Reservoir	1000	130 x 210	1

2149 PYREX Brand, Flash Chromatography Column

Column is ideal for use when quick separations in absorption chromatography applications are desired. A typical unit consists of a column with 2 mm bore Teflon stopcock, a reservoir, Cat. No. 2148, with a 0-4 mm Teflon® valve.

Cat. No.	Description	Column O.D. x Length (mm)	Qty/Cs
2149-13	Column	13 x 450	1
2149-22	Column	22 x 450	1
2149-45	Column	45 x 450	1
2149-54	Column	54 x 450	1

2153 PYREX Brand, Chromatographic Reagent Atomizer

For use in spraying reagents in thin layer chromatography. With full length ⅋ 24/40 joint between reservoir and spraying device.

Cat. No.	Description	Capacity (mL)	Approx. Height (mm)	Qty/Cs
2153-125	Atomizer	125	188	1
2153-250	Atomizer	250	208	1

CONCENTRATORS

2157 PYREX Brand, Kuderna-Danish Concentrator Apparatus, Without Hooks, ⅋ Joints

A Kuderna Danish Concentrator supplied with Keck clamps instead of spring hooks. The complete apparatus consists of a 3-Ball Snyder column (with24/40 joints), a flask (with ⅋ 24/40 top and ⅋ 19/22 lower joint), and a graduated tube (with ⅋ 19/22 joints). All columns have venting dimples. The 250 mL and 500 mL completes include a 10 mL tube. The 1000 mL complete has a 25 mL tube.

Cat. No.	Description	Total Height (mm)	⅋ Inner Joint Size	⅋ Outer Joint Size	Qty/Pk	Qty/Cs
2157-500*	500 mL Complete	615	19/22	24/40	–	1
2157-1L	1000 mL Complete	720	19/22	24/40	–	1
2157-250FO	250 mL Flask Only	–	19/22	24/40	1	4
2157-500FO	500 mL Flask Only	–	19/22	24/40	1	4
2157-1LFO	1000 mL Flask Only	–	19/22	24/40	1	4
2157-10TO**	10 mL Tube Only	–	–	19/22	1	6
2157-15TO**	15 mL Tube Only	–	–	19/22	1	6
2157-25TO**	25 mL Tube Only	–	–	19/22	1	6

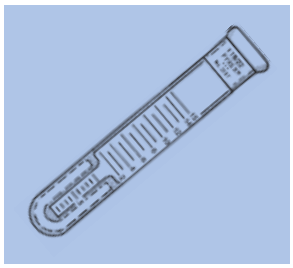
*2157-50, 2157-500: The completes include 1 each blue and green Keck clamps.
** 2157-10TO, 2157-15TO, 2157-25TO Graduations: 0-2 mL in .1 mL increments. 3 mL to capacity on in 1.0 mL increments.
Note: For Synder column only, see Cat. No. 2158-CO.

2157-100T/TJ PYREX® Brand, Concentrator Tube, 100 mL

The innovative PYREX brand concentrator tube combines the concepts of a Kuderna-Danish flask and tube into one piece of glass apparatus. Designed for use with the PYREX Accelerated One-Step extractor/concentrator, it comes in both jacketed and unjacketed versions. The 100 mL capacity permits sufficient solvent capacity for the full extraction process.The jacketed version permits circulation of hot water through the jacket to boil the solvent during extraction/concentration. The bottom portion of the tube is never heated, so the sample won't boil dry. The unjacketed version can be placed in a hot water bath for solvent heating. Threaded tubulations are 8 mm. I.D.

Cat. No.	Description	Capacity (mL)	Qty/Cs
2157-100T	Concentrator Tube, plain	100	1
2157-100TJ	Concentrator Tube, jacketed	100	1
2158-CW	Hardware Asst. for tubes with threaded tubulations (6 connectors and 12 washers)	–	6

*Supplied with 2 connectors, 2 washers, and 1 Keck clamp.



2157-NT PYREX Brand, Kuderna-Danish, Insulated Tip Concentrator Tubes, Without Hooks, ⅋ Joints

Tubes without spring hooks. Insulated tip K-D tubes have an air jacket around the tip. Less heat applied to the tip due to this insulation reduces the chance that the sample will boil to dryness. Compatible with all standard Kuderna-Danish apparatus.

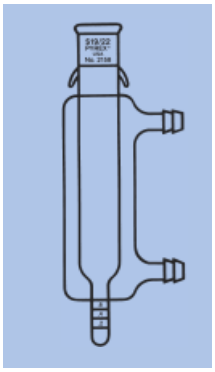
Cat. No.	Capacity (mL)	O.D. x Height (mm)	⅋ Joint Size	Qty/Cs
2157-10NT	10	22 x 120	19/22	1
2157-15NT	15	22 x 140	19/22	1
2157-25NT	25	22 x 180	19/22	1

2158 PYREX Brand, Kuderna-Danish Concentrator Apparatus, ⅋ Joints

The complete apparatus consists of a 3-Ball Snyder column (with ⅋ 24/40 joints), a flask (with ⅋ 24/40 tops and ⅋ 19/22 lower joint) and a graduated tube (with ⅋ 19/22 joints). If further concentration is desired, select a 2-Ball column (2158-2CO) and combine with the KD tube of your choice. The 250 mL and 500 mL completes include a 10 mL tube. The 1000 mL complete includes a 25 mL tube.

Cat. No.	Description	Total Height (mm)	⅋ Inner Joint Size	⅋ Outer Joint Size	Length (mm)	Qty/ Pk	Qty/ Cs
2158-250[a]	250 mL Complete	594	19/22	24/40	–	–	1
2158-500[b]	500 mL Complete	615	19/22	24/40	–	–	1
2158-1L[c]	1000 mL Complete	720	19/22	24/40	–	–	1
2158-125FO[d]	125 mL Flask Only	–	19/22	24/40	–	1	4
2158-250FO[c]	250 mL Flask Only	220	19/22	24/40	–	1	4
2158-500FO[b]	500 mL Flask Only	–	19/22	24/40	–	–	4
2158-1LFO[c]	1000 mL Flask Only	–	19/22	24/40	–	1	4
2158-2CO	2 Ball Snyder Column	–	19/22	19/22	150	–	1
2158-3CO	3 Ball Snyder Column	–	24/40	24/40	305	–	1
2158-4TO[e]	4 mL Tube Only	–	–	19/22	–	1	6
2158-10TO[e]	10 mL Tube Only	–	–	19/22	–	1	6
2158-15TO[e]	15 mL Tube Only	–	–	19/22	–	1	6
2158-25TO[e]	25 mL Tube Only	–	–	19/22	–	1	6

[a]Each includes a pair of 1⅜" stainless steel springs.
[b]The 500 mL includes springs and two sizes of Keck clamps.
[c]Each includes a pair of 1⅜" stainless steel springs.
[d]Each includes a pair of 1⅜" stainless steel springs.
[e]Graduations: 0-2 mL are in 0.1 mL increments. 3 mL to capacity are in 1.0 mL increments.



2158-JTO PYREX® Brand, Kuderna-Danish Concentrator Tube, Jacketed

The innovative PYREX brand jacketed Kuderna-Danish concentrator tube circulates hot water through the jacket to boil the solvent during extraction/concentration. The bottom portion of the tube is never heated, so samples won't boil dry. The concentration automatically stops when the solvent sinks below the jacket. Lab technician time is saved by eliminating the need to watch evaporations closely to avoid boiling dry. With serrated tubulations or screw thread connections for fast set up and tear down.

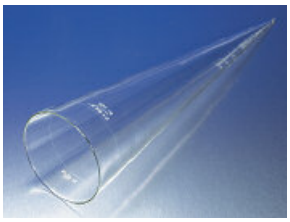
Cat. No.	Description	Approx. Length (mm)	Capacity (mL)	Qty/Cs
2158-10JTO	Serrated Tubulation	198	10	1
2158-1JTO	Serrated Tubulation	198	1	1

2159 PYREX Brand, Solvent Recovery

The PYREX brand solvent recovery head allows for condensation and collection of solvents while performing concentrations with a Kuderna-Danish concentrator. 96-99% solvent recovery allows for concentrations to be done outside the hood. Unique, simple design allows use with existing condensers and flasks.

Cat. No.	Description	⅀ Inner Joint Size	⅀ Outer Joint Size	Approx. Length (mm)	Qty/Pk	Qty/Cs
2159-24	Solvent Recovery Head	24/40	24/40	150	1	4

CONES



2160 PYREX Brand, Imhoff, Sediment, Sharp Tip

For determination of small amounts of suspended matter in sewage by the Imhoff Sedimentation Method. Graduated from 0 to 1 mL in 0.1 mL divisions, 1 to 10 mL in 0.5 mL and 10 to 40 mL in 1 mL; also marked at 1000 mL.

Cat. No.	Approx. Height (mm)	Approx. Dia. at Top (mm)	Qty/Pk	Qty/Cs
2160-454	435	110	2	4

2180 PYREX Brand, Imhoff, Sediment, Blunt Tip

For use with heavy sediments, where ability to read small volumes is unimportant. Graduated from 0 to 1 mL in 0.1 mL divisions, 1 to 10 mL in 0.5 mL and 10 to 40 mL in 1 mL; also marked at 1000 mL. The blunt tip increases its ruggedness and cleaning ease.

Cat. No.	Approx. Height (mm)	Approx. Dia. at Top (mm)	Qty/Pk	Qty/Cs
2180-439	415	110	2	4

CONDENSERS

2155 PYREX Brand, Distilling, Condenser, Drip Tip, ⅀ Joints

This distilling column is simple in design and easy to use. It is useful for a wide range of applications in the lab, particularly in fractionation.

Cat. No.	Approx. Length (mm)	⅀ Joint Size	Approx. Jacket O.D. x Length (mm)	Tublation O.D. (mm)	Qty/Cs
2155-14	274	14/20	28 x 190	10	1
2155-19	283	19/22	28 x 190	10	1

*This column is also a replacement for organic chemistry kits Cat. Nos. 6949-6949K.

52300 PYREX Brand, Tube, Low Actinic, Drip Tip, ⅀ Joint

A simple air condenser, useful for condensation of materials with boiling points above 150°C, with an inner ⅀ 24/40 drip tip. Low actinic glass protects light sensitive materials.

Cat. No.	Approx. O.D. x Length (mm)	⅀ Inner Inner Joint Size	Qty/Cs
52300-650	13 x 650	24/40	1

2340 PYREX® Brand, Liebig, Sealed Inner Tube

A general purpose condenser that can be used for distillation and extraction. Although the condensing area per unit length of the jacket is low, the large capacity water jacket gives efficient cooling. Approximate tubulation O.D. is 10 mm. The adapter end is tooled for uniform stopper fit, accommodating a No. 3 rubber stopper.

Cat. No.	Approx. Jacket O.D. x Length (mm)	Approx. Height (mm)	Qty/Cs
2340-200	41 x 200	345	1

2360 PYREX Brand, Liebig, Drip Tip, Inner Ⓢ Joint

A general purpose condenser that can be used for distillation, refluxing and extraction operations. With inner Ⓢ joint at the bottom with a drip tip. The tubulation O.D. is approximately 10 mm.

Cat. No.	Ⓢ Inner Joint Size	Rubber Stopper No.	Approx Jacket O.D. x Length (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
2360-400	24/40	3	41 x 400	545	1	4
2360-500	24/40	3	41 x 500	645	–	1

2400 PYREX Brand, Liebig, Drip Tip, Inner and Outer Ⓢ Joints

A general purpose condenser that can be used for distillation and extraction. Suitable for use in vacuum distillations. With the outer joint at the top and the inner joint at the bottom with a drip tip. The tubulation O.D. is approximately 10 mm.

Cat. No.	Ⓢ Joint Size Inner	Ⓢ Joint Size Outer	Approx. Jacket O.D. x Length (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
2400-200	19/38	19/38	41 x 200	350	–	1
2400-300	24/40	24/40	41 x 300	450	1	4
2400-400	24/40	24/40	41 x 400	550	1	4
2400-500	24/40	24/40	41 x 500	650	1	4

2401 PYREX Brand, Column, with Indentations, Micro, Drip Tip, Ⓢ Joints

For use on small assemblies. The tubulation O.D. is 10 mm.

Cat. No.	Approx. Length (mm)	Ⓢ Inner Joint Size	Ⓢ Outer Joint Size	Approx. Jacket O.D. x Length (mm)	Qty/Cs
2401-14	188	14/20	14/20	23 x 107	1
2401-24	309	24/40	24/40	38 x 185	1

*This condenser is also a replacement part for organic chemistry kits Cat. Nos. 6949-6949K.

2480 PYREX Brand, Allihn, Drip Tip, Inner and Outer Ⓢ Joints

A widely used condenser with greater surface area than the corresponding Liebig type. With the outer Ⓢ joint at the top and the inner joint at the bottom with a drip tip. Suitable for use in vacuum distillations. The tubulations have an O.D. of approximately 10 mm.

Cat. No.	No. of Bulbs	Ⓢ Joint Size Inner	Ⓢ Joint Size Outer	Approx. Jacket O.D. x Length (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
2480-200	3	19/38	19/38	41 x 200	350	–	1
2480-300	5	24/40	24/40	41 x 300	450	1	6
2480-400	6	24/40	24/40	41 x 400	550	1	6
2480-500	8	24/40	24/40	41 x 500	650	–	1
2480-600	10	29/42	29/42	41 x 600	750	–	1

2490 PYREX® Brand, Cold Finger, Inner Joint

A simple condenser, of relatively low efficiency, often used to regulate refluxing by adjusting the flow of air or water through it (dephlegmation). The tubulation O.D. is approximately 10 mm.

Cat. No.	Approx. Height (mm)	Joint Size	Approx. Jacket O.D. x Length (mm)	Qty/Cs
2490-24	176	24/40	12 x 86	1

*This condenser is also a replacement part for organic chemistry kits Cat. Nos. 6949-6949K.

2560 PYREX Brand, Graham, Drip Tip, Inner and Outer Joints

This condenser has a high surface area per unit length of jacket. Primarily used in vacuum distillations. With the outer joint at the top and the inner joint at the bottom with a drip tip. The tubulation O.D. is approximately 10 mm.

Cat. No.	Joint Size Inner	Joint Size Outer	Approx. Jacket O.D. x Length (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
2560-200	19/38	19/38	41 x 200	350	–	1
2560-300	24/40	24/40	41 x 300	450	1	6
2560-400	24/40	24/40	41 x 400	550	1	4
2560-500	24/40	24/40	41 x 500	650	1	4

2640 PYREX Brand, Friedrichs, Drip Tip, Inner and Outer Joints

The Friedrichs type condenser affords very efficient operation. The helical inner tube fits closely within the jacket. The vapor tube is sealed to the jacket at an angle of 75° and has an outer 24/40 joint.

Cat. No.	Approx. O.D. x Length (mm)	Inner Joint Size	Outer Joint Size	Qty/Pk	Qty/Cs
2640-350	50 x 325	24/40	24/40	1	4

2700 PYREX Brand, West

This condenser is designed with a heavy-wall outer jacket to provide a sturdy, long-lasting unit, while the inner tube has a thinner wall for efficient heat transfer. The tubulations are on the same side to reduce breakage and the adapter ends are all tooled for No. 3 rubber stopper fit. The tubulation O.D. is approximately 10 mm.

Cat. No.	Approx. Jacket O.D. x Length (mm)	Approx. Height (mm)	Qty/Cs
2700-200	19 x 200	345	1

2705 PYREX Brand, West, Drip Tip, Inner and Outer Joints

The tubulation O.D. is approximately 10 mm.

Cat. No.	Approx. Jacket O. D. x Length (mm)	Joint Size Inner	Joint Size Outer	Approx. Length (mm)	Qty/Pk	Qty/Cs
2705-14	18 x 190	14/20	14/20	283	–	1
2705-19*	18 x 190	19/22	19/22	283	2	4

*This condenser is a replacement part for organic chemistry kits, Cat. Nos. 6949-6949K.

2800 PYREX Brand, West, Drip Tip, Inner and Outer Joint

This condenser is designed with a heavy-wall outer jacket to provide a sturdy, long-lasting unit, while the inner tube has a thinner wall for efficient heat transfer. Tubulations are on the same side to reduce breakage. With the outer joint at the top and the inner joint at the bottom with a drip tip. The tubulation O.D. is approximately 10 mm.

Cat. No.	Inner Joint Size	Outer Joint Size	Jacket O.D. x Approx. Length (mm)	Approx. Height (mm)	Qty/Pk	Qty/Cs
2800-300	24/40	24/40	18 x 300	450	1	4

CRUCIBLE AND COVER

12940 VYCOR® Brand, Crucible and Cover

The transparent body and lid are useful in analytical work, particularly where ashing of the sample is required. Lids will be found useful for covering platinum or opaque crucibles. Note: Using covers of dissimilar material can cause spalling.

Cat. No.	Description	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
12940-30CO	Cover Only	NA	54 x 21	1	6
12940-30BO	Bottom Only	30	45 x 40	–	6
12940-50CO	Cover Only	NA	60 x 21	1	6
12940-50BO	Bottom Only	50	50 x 50	–	6

CYLINDERS

2962 PYREX® Brand, Hydrometer Jar

Breakage is minimized by the heavy wall construction. The large hexagonal base, sealed to the cylinder body, increases stability. Meets ASTM specifications D-287 and E-100.

Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
2962-100	100	29 x 254	1	18
2962-250	250	39 x 340	1	18
2962-300	300	39 x 381	1	12
2962-500	500	50 x 390	1	12
2962-1L	1000	64 x 465	1	1

2982 PYREX Brand, Single Metric Scale, PYREX ⅋ Stopper, Graduated, TC

Calibrated "to contain." Useful as a mixing cylinder. Each features the PYREX stopper. Graduations are in durable white enamel. See Cat. No. 3002 for the equivalent cylinder supplied with a Corning® test certificate.

Cat. No.	Description	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Pk	Qty/Cs
2982-10	Complete	10	0.1	0.2	13 x 195	9	2	24
2982-25	Complete	25	0.2	0.3	18 x 225	13	1	18
2982-50	Complete	50	1.0	0.5	24 x 255	16	1	12
2982-100	Complete	100	1.0	1.0	29 x 295	16	1	8
2982-250	Complete	250	2.0	2.0	39 x 385	22	1	8
2982-500	Complete	500	5.0	4.0	50 x 445	27	1	6
2982-1L	Complete	1000	10.0	6.0	64 x 520	32	–	1
2982-2L	Complete	2000	20.0	12.0	83 x 590	38	–	1

For stopper only, see Cat. No. 7650.

2983 PYREX Brand, Single Metric Scale, Polyethylene Stopper, Graduated, TC

Calibrated "to contain." Useful as a mixing cylinder. Graduations are in durable white enamel. Stopper made of linear, high density polyethylene, to conform to ⅋ stopper dimensions. The stopper has a ribbed top to provide a sure grip when inserting or removing.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Cs
2983-50	50	1.0	0.5	24 x 255	16	1
2983-100	100	1.0	1.0	29 x 300	16	1
2983-250	250	2.0	2.0	39 x 390	22	1
2983-500	500	5.0	4.0	50 x 438	27	1
2983-1L	1000	10.0	6.0	64 x 510	32	1
2983-2L	2000	20.0	12.0	83 x 580	38	1

For polyethylene stopper only, see Cat. No. 7624.

2984 PYREX® Brand, Blue Single Metric Scale, Graduated, TC

Calibrated "To Contain." Useful as a mixing cylinder. Graduations are in durable blue enamel. Each features a PYREX stopper. Approx. height does not include stopper.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. ± (mL)	Approx. O.D. x Height (mm)	Stopper No.	Qty/Pk	Qty/Cs
2984-10	10	0.1	0.2	13 x 175	9	1	24
2984-25	25	0.2	0.34	18 x 202	13	1	18
2984-50	50	1.0	0.5	24 x 230	16	1	12
2984-100	100	1.0	1.0	29 x 270	16	1	8
2984-250	250	2.0	2.0	39 x 360	22	1	8
2984-500	500	5.0	4.0	50 x 410	27	1	6
2984-1L	1000	10.0	6.0	64 x 485	32	–	1
2984-2L	2000	20.0	12.0	83 x 550	38	–	1

For stoppers only, see Cat. No. 7650.

3002 PYREX Brand, Serialized/Certified, Class A, Single Metric Scale, Graduated, TC, ⅋ PYREX Stopper

Useful as a mixing cylinder. Calibrated “to contain” in accordance with ASTM E-1272 and ASTM E-542. Each cylinder is individually serialized and supplied with a Corning Certificate of Identification and Capacity, traceable to NIST standards. Each features the PYREX stopper. Graduation markings are in durable white enamel.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Cs
3002-10	10	0.1	.10	13 x 195	9	1
3002-25	25	0.2	.17	18 x 225	13	1
3002-50	50	1.0	.25	24 x 255	16	1
3002-100	100	1.0	.50	29 x 295	16	1
3002-250	250	2.0	1.0	39 x 385	22	1
3002-500	500	5.0	2.0	50 x 445	27	1
3002-1L	1000	10.0	3.0	64 x 520	32	1
3002-2L	2000	20.0	6.0	83 x 550	38	1

For stopper only, see Cat. No. 7650.

3012 PYREX Brand, Single Metric Scale, Outer ⅋ Joint, Graduated, TC

Calibrated “to contain.” Equipped with a ⅋ 24/40 outer joint, these cylinders are particularly useful as distilling receivers. Graduation markings are in durable white enamel. Supplied without stoppers.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Cs
3012-50	50	1.0	0.5	24 x 255	1
3012-100	100	1.0	1.0	29 x 295	1
3012-250	250	2.0	2.0	39 x 380	1

3022 PYREX® Brand, Single Metric Scale, Graduated, TC

Calibrated "to contain," with white enamel graduations. The 100 mL capacity is in accordance with ASTM E-133 and E-1272 and is used in ASTM tests D-86, D-216 and D-447. The 10 mL size has a funnel top. Bumper guards are supplied with 25mL thru 2000 mL sizes inclusive.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3022-10	10	0.1	0.2	13 x 178	2	24
3022-25	25	0.2	0.3	18 x 192	1	18
3022-50	50	1.0	0.5	24 x 225	1	18
3022-100	100	1.0	1.0	29 x 254	1	12
3022-250	250	2.0	2.0	39 x 340	1	12
3022-500	500	5.0	4.0	50 x 392	1	8
3022-1L	1000	10.0	6.0	64 x 465	1	1
3022-2L	2000	20.0	12.0	83 x 520	1	1

3023 PYREX Brand, Cylinder, Double Metric Scale, Class A, Graduated, TD

Cylinders are calibrated "to deliver" in accordance with ASTM E-1272 and ASTM E-542. The double scale, numbered up and down, is in durable white enamel. Supplied with shock absorbing polyethylene bumper guards.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3023-25	25	.2	.17	18 x 192	1	18
3023-50	50	1.0	.25	24 x 225	1	18
3023-100	100	1.0	.50	29 x 254	1	12
3023-250	250	2.0	1.0	39 x 340	1	12
3023-500	500	5.0	2.0	50 x 390	1	8
3023-1L	1000	10.0	3.0	64 x 465	–	1
3023-2L	2000	20.0	6 .0	83 x 520	–	1

3024 PYREX Brand, Single Metric Scale, Graduated, TD

Calibrated "to deliver," with white enamel graduations. Bumper guards are supplied on 25 mL through 4000 mL sizes.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. ± (mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3024-5*	5	0.1	0.1	12 x 117	2	12
3024-10*	10	0.1	0.2	13 x 177	2	24
3024-25	25	0.2	0.3	18 x 192	1	18
3024-50	50	1.0	0.5	24 x 225	1	18
3024-100	100	1.0	1.0	29 x 254	1	12
3024-250	250	2.0	2.0	39 x 340	1	12
3024-500	500	5.0	4.0	50 x 390	1	8
3024-1L	1000	10.0	6.0	64 x 465	1	1
3024-2L	2000	20.0	12.0	83 x 520	1	1
3024-4L	4000	50.0	29.0	110 x 585	–	1
3024-PACK**						Assortment Pack

*Funnel top.
**The assortment pack includes one each of the 10mL, 25mL, 50mL, 100mL and 250mL sizes.

63024 PYREXPLUS® Brand, Single Metric Scale, Protective Coating, Graduated, TD

Cylinder features a protective polymer coating for longer product life and safety. Autoclavable (121°C) and resistant to thermal shock. The cylinder is calibrated "to deliver." Bumper guards not supplied. Covered by U.S. Patent #4940613.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
63024-100	100	1.0	1.0	29 x 254	1	4
63024-250	250	2.0	2.0	39 x 340	1	4
63024-500	500	5.0	4.0	50 x 390	1	4
63024-1L	1000	10.0	6.0	64 x 460	1	4
63024-2L	2000	20.0	12.0	83 x 520	1	2

3025 PYREX® Brand, Double Metric Scale, Economy, Graduated, TC

Calibrated "to contain." A less costly cylinder, designed for those institutions performing many general laboratory procedures. No bumper guards supplied.

Cat. No.	Capacity (mL)	Gradutation Interval (mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3025-10	10	0.1	17 x 140	2	24
3025-25	25	0.2	20 x 144	1	18
3025-50	50	1.0	28 x 166	1	18
3025-100	100	1.0	29 x 254	1	12
3025-250	250	2.0	39 x 340	1	12
3025-500	500	5.0	50 x 390	1	8
3025-1L	1000	10.0	64 x 465	1	1
3025-2L	2000	20.0	83 x 520	1	1

3026 PYREX Brand, Cylinder, Double Metric Scale, Class A, Graduated, TD

Cylinders are calibrated "to deliver" in accordance with ASTM E-1272 and ASTM E-542. The double scale, numbered up and down, is in a durable blue enamel. Supplied with shock absorbing polyethylene bumper guards.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3026-25	25	.2	.17	18 x 192	1	18
3026-50	50	1.0	.25	24 x 225	1	18
3026-100	100	1.0	.50	28 x 254	1	12
3026-250	250	2.0	1.0	39 x 340	1	12
3026-500	500	5.0	2.0	50 x 390	1	8
3026-1L	1000	10.0	3.0	64 x 465	–	1
3026-2L	2000	20.0	6.0	83 x 520	–	1

3042 PYREX Brand, Lifetime Red™, Single Metric Scale, Graduated, TC

Calibrated "to contain." The scale and figures are durable white enamel, which stand out clearly against the red color-band on these Lifetime Red cylinders. The 10 mL size has a funnel top. Bumper guards are supplied with 100 mL through 2000 mL inclusive. The 100 mL size is made in accordance with ASTM E-133 and E-1272 and is used in ASTM tests D-86 and D-216.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3042-10	10	0.1	0.2	13 x 178	1	24
3042-100	100	1.0	1.0	29 x 254	1	12
3042-500	500	5.0	4.0	50 x 390	1	8
3042-1L	1000	10.0	6.0	64 x 465	1	1
3042-2L	2000	20.0	12.0	83 x 520	1	1

For the same cylinder, but with a built-in glass bumper guard, see Cat. No. 3046.

3044 PYREX® Brand, Lifetime Red, Single Metric Scale, Double Pourout, Graduated, TC

Calibrated "to contain." The scale and figures are durable white enamel which stand out clearly against the red color-band on these Lifetime Red cylinders. The cylinder is a Tuttle type of low form for stability and features a double pourout for convenience.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3044-50	50	1.0	0.5	29 x 148	1	12
3044-100	100	2.0	1.0	39 x 157	1	12

3046 PYREX Brand, Lifetime Red™, Single Metric Scale, Graduated, TC

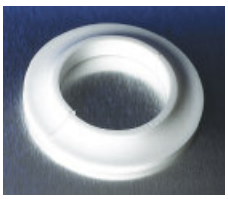
Calibrated "to contain." A reinforced bead of glass near the top helps to reduce breakage, if the cylinder upsets. The 100 mL cylinder is in accordance with ASTM E-133 and E-1272 and is used in ASTM D-86, D-216, and D-447.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
3046-10	10	0.1	0.2	13 x 179	1	24
3046-25	25	0.2	0.3	18 x 205	1	18
3046-50	50	1.0	0.5	24 x 238	1	18
3046-100	100	1.0	1.0	29 x 267	1	12
3046-250	250	2.0	2.0	39 x 353	1	12

3062 PYREX Brand, Serialized/Certified, Class A, Single Metric Scale, Graduated, TD

Calibrated "to deliver" in accordance with ASTM E-1272 and ASTM E-542. Each cylinder is individually serialized and supplied with a Certificate of Identification and Capacity, traceable to NIST standards. Permanent white graduations are easy to read. Bumper guards are supplied with 25 mL through 2000 mL inclusive. The 10 mL size has a funnel top.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	ASTM Tol. (± mL)	Approx. O.D. x Height (mm)	Pk/Cs	Qty/Cs
3062-10	10	0.1	0.10	13 x 178	1	1
3062-25	25	0.2	0.17	18 x 192	1	1
3062-50	50	1.0	0.25	24 x 225	1	1
3062-100	100	1.0	0.50	29 x 254	1	1
3062-250	250	2.0	1.0	39 x 340	1	1
3062-500	500	5.0	2.0	50 x 390	1	1
3062-1L	1000	10.0	3.0	64 x 465	1	1
3062-2L	2000	20.0	6.0	83 x 520	1	1

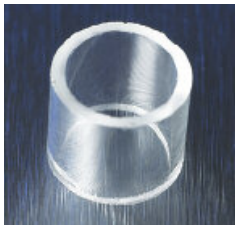


3066 PYREX Brand, Bumper Guard

A polyethylene shock absorbing ring designed to reduce breakage of cylinders. For best results, slide the ring toward the top to absorb shock should the cylinder be accidentally upset.

Cat. No.	Fits Cylinder Capacity (mL)	Qty/Cs
3066-25	25	1
3066-50	50	1
3066-100	100	1
3066-250	200, 250	1
3066-500	500	1
3066-1L	1000	1
3066-2L	2000	1

CLONING CYLINDERS



3166 PYREX® Brand, Cloning Cylinder

Clone a single cell or group of cells by surrounding them with this glass cylinder. Dip the end of the cylinder into a sterile silicone grease before pressing to the bottom of a culture flask to create an isolated well.

Cat. No.	Description	Dimensions O.D. x Height (mm)	Qty/Cs
3166-6	Cloning Cylinder	6 x 8	125
3166-8	Cloning Cylinder	8 x 8	125
3166-10	Cloning Cylinder	10 x 10	125

3167 PYREX Brand, Disinfectant Testing Cylinder

These cylinders are designed for use in the Disinfectant Testing Procedure as described in the 1992 J.A.O.A.C. Hard Surface Carrier Test for Efficacy Testing of Disinfectants: Collaborative Study. Tubes are glazed on both ends.

Cat. No.	Description	Dimensions O.D. x Height (mm)	Qty/Cs
3167-8	Disinfectant Testing Cylinder	8 x 8	125
3167-10	Disinfectant Testing Cylinder	8 x 10	125

DESICCATORS

3078 PYREX Brand, Small Size, Knob Top

Designed for general analytical work. The large sturdy knob makes the cover easy to handle. Approximate bowl volume is 2200 mL. Not for vacuum applications.

Cat. No.	Description	Approx. I.D. of Ground Flange (mm)	Approx. Total Height (mm)	Approx. Chamber Depth (mm)	Recom. Plate Diam. (mm)	Qty/Cs
3078-160	Complete	160	255	100	140	1
3078-160CO	Cover Only	160	95	–	–	1
3078-160LO	Lower Only	160	160	100	140	1

Warning: Do not heat or subject to pressure.

3080 PYREX Brand, Large Size, Knob Top

Approximate bowl volume is 3800 mL on the 200 mm size and 7500 mL on the 250 mm size. Not for vacuum applications.

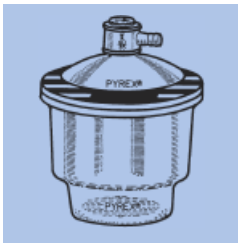
Cat. No.	Description	Approx. I.D. of Ground Flange (mm)	Approx. Total Height (mm)	Approx. Chamber Depth (mm)	Recom. Plate Diam. (mm)	Qty/Cs
3080-200	Complete	200	315	125	190	1
3080-250	Complete	250	325	130	230	1
3080-200CO	Cover Only	200	112	–	–	1
3080-250CO	Cover Only	250	117	–	–	1
3080-200LO	Lower Only	200	202	125	190	1
3080-250LO	Lower Only	250	210	130	230	1

Warning: Do not heat or subject to pressure.

3100 PYREX Brand, Large Size, Opening for a No. 8 Rubber Stopper

Approximate bowl volumes 3800 mL and 7500 mL respectively. Rated 1-atmosphere vacuum.

Cat. No.	Description	Approx. I.D. of Ground Flange (mm)	Approx. Total Height (mm)	Approx. Chamber Depth (mm)	Recom. Plate Dia. (mm)	Qty/Cs
3100-200	Complete	200	295	125	190	1
3100-250	Complete	250	310	130	230	1
3100-200CO	Cover Only	200	95	–	–	1
3100-250CO	Cover Only	250	100	–	–	1



3118 PYREX® Brand, Small Size, Sleeve

The rugged 40/35 external sleeve with tooled hose connection serves as the stopcock and is designed so that its manipulation is not affected by the vacuum. The open position is indicated by the molded arrow on the cap. A quarter turn from this position closes the desiccator. For ease in use and improved performance, it is recommended that the sleeve be lubricated with a silicone-based vacuum grease.The tubulation O.D. is approximately 10 mm. Approximate bowl volume capacity is 2200 mL. Rated 1-atmosphere vacuum.

Cat. No.	Description	Approx. I.D. of Ground Flange (mm)	Approx. Total Height (mm)	Approx. Chamber Depth (mm)	Recom. Plate Diam. (mm)	Qty/Cs
3118-160	Complete	160	255	100	140	1
3118-160CO	Cover Only	160	95	–	–	1
3118-SO	Sleeve Only	–	35	–	–	1
3118-RO	Ring Only	–	–	–	–	1

For lower part only, see Cat. No. 3078.
Warning: Do not heat or subject to pressure.

3120 PYREX Brand, Large Size, ⅌ Sleeve

The rugged 55/38 external sleeve with tooled hose connection serves as the stopcock and is designed so that its manipulation is not affected by the vacuum. The open position is indicated by the molded arrow on the cap. A quarter turn from this position closes the desiccator. For ease in use and improved performance, it is recommended that the sleeve be lubricated with a silicone-based vacuum grease. The tubulation O.D. is approximately 10 mm. Bowl capacities 3800 mL and 7500 mL respectively. Rated 1-atmosphere vacuum.

Cat. No.	Description	Approx. I.D. of Ground Flange (mm)	Approx. Total Height (mm)	Approx. Chamber Depth (mm)	Recom. Plate Diam. (mm)	Qty/Cs
3120-200	Complete	200	315	125	190	1
3120-250	Complete	250	325	130	230	1
3120-200CO	Cover Only	200	112	–	–	1
3120-250CO	Cover Only	250	117	–	–	1
3120-SO	Sleeve Only	–	35	–	–	1
3120-RO	Ring Only	–	–	–	–	1

For lower part only, see Cat. No. 3080.
Warning: Do not heat or subject to pressure.

DISHES

3140 PYREX Brand, Crystallizing

The rims on these dishes are reinforced and fire polished to reduce chipping. Will withstand repeated sterilization (wet or dry). Ideal for storage and crystallization.

Cat. No.	Capacity (mL)	Fl. Oz.	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
3140-70	180	6	70 x 50	6	24
3140-80	180	6	80 x 40	6	24
3140-90	270	9	90 x 50	6	18
3140-100	325	11	100 x 50	6	18
3140-125	740	25	125 x 65	4	12
3140-150	1200	30	150 x 75	4	8
3140-170	1770	60	170 x 90	2	8
3140-190	2500	85	190 x 100	2	6

3160 PYREX® Brand, Culture, Petri

These flat, clear dishes will withstand repeated sterilization (wet or dry). The edges are beaded to provide greater mechanical strength. The bead also provides a means to equally space the side walls of the bottom and cover, thereby reducing the capillary action of condensed moisture on the sides. They are not affected chemically or thermally by any of the methods commonly employed in laboratories where sterilization is a major factor in routine or in specialized work. The covered dish is not airtight. The tops are marked in blue enamel and the bottoms in white enamel to make sorting easier. Bottoms also have a triangular, enamel reference point for serial dilutions.

Cat. No.	Description	Size (mm)	Approx. Diam. x Height (mm)	Qty/Pk	Qty/Cs
3160-60	Complete	60 x 15	58 x 15	12	72
3160-100	Complete	100 x 10	98 x 10	12	72
3160-101	Complete	100 x 15	98 x 15	12	72
3160-102	Complete	100 x 20	98 x 20	12	72
3160-150	Complete	150 x 15	148 x 15	12	24
3160-152	Complete	150 x 20	148 x 20	12	24
3160-60CO	Cover Only	60 x 15	58 x 15	–	12
3160-100CO	Cover Only	100 x 10	98 x 10	–	12
3160-101CO	Cover Only	100 x 15	98 x 15	–	12
3160-102CO	Cover Only	100 x 20	98 x 20	–	12
3160-150CO	Cover Only	150 x 15	148 x 15	–	12
3160-152CO	Cover Only	150 x 20	148 x 20	–	12
3160-60BO	Bottom Only	60 x 15	58 x 15	–	12
3160-100BO	Bottom Only	100 x 10	98 x 10	–	12
3160-101BO	Bottom Only	100 x 15	98 x 15	–	12
3160-102BO	Bottom Only	100 x 20	98 x 20	–	12
3160-150BO	Bottom Only	150 x 15	148 x 15	–	12
3160-152BO	Bottom Only	150 x 20	148 x 20	–	12
3163-100	Quandrant Dish	100 x 20	95 x 22	6	72

3170 PYREX Brand, Drying, Heavy Wall

This tray will withstand hot air or steam sterilization. Useful for gel work or paper chromatography. Do not place over direct heat, for oven use only.

Cat. No.	Approx. Top Width (mm)	Approx. Top Length (mm)	Approx. Inside Depth (mm)	Qty/Cs
3170-12	305	457	72	4

3175 PYREX Brand, Drying

A range of trays designed for use as drying, staining or developing trays. They can be used with paper or gel electrophoresis or paper chromatography. Trays will withstand autoclaving. Do not place over direct heat, for oven use only.

Cat. No.	Approx. Size L x W x H (mm)	Approx. Capacity (mL)	Qty/Cs
3175-7	272 x 180 x 50	1750	4
3175-8	201 x 201 x 55	2000	4
3175-9	330 x 217 x 70	3000	4
3175-10	349 x 249 x 60	3500	4

3180 PYREX® Brand, Evaporating, Flat Bottom

These dishes have rugged beaded rims and are of standard medium depth.

Cat. No.	Approx. O.D. x Height (mm)	Approx. Volume (mL)	Qty/Pk	Qty/Cs
3180-80	80 x 45	140	–	6
3180-90	90 x 50	170	–	6
3180-105	105 x 55	290	1	6

13180 VYCOR® Brand, Evaporating, Flat Bottom

Useful for ashing material, particularly in electric furnaces. Ashing of alkaline materials and some metallic oxides can cause etching of VYCOR brand products. The degree of etching will depend on alkalinity and ashing temperature. Made of Code No. 7913 glass (96% silica), which has high thermal and chemical resistance and is stable with acids, water and steam.

Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Cs
13180-45	45	70 x 28	12
13180-100	100	90 x 42	8

DISTILLING APPARATUS

3340 PYREX Brand, Kjeldahl, Nitrogen, ⅋ Joints

Used for determining nitrogen in organic compounds. This assembly includes a Kjeldahl flask specifically developed for this process. Both the digestion and distillation stages can be performed in this flask. The assembly shown is the distillation stage, where the amount of ammonia, and hence, nitrogen, is established. The inlet tube allows the permanganate solution to be introduced after distillation. Supplied with an outer ⅋ 29/42 joint on the flask and an outer ⅋ 19/38 joint on the Graham condenser. Total height is 410 mm; total width is 300 mm; maximum O.D. is 97 mm.

Cat. No.	Description	Capacity (mL)	Qty/Cs
3340-500	Complete	500	1
3340-TO	Tube Only	–	1
3340-FO	Flask Only	–	1
2540-200	Condenser Only	–	1

3350 PYREX Brand, Cyanide

Used in testing for soluble and insoluble cyanides in water. Cyanide as hydrocyanic acid (HCN) is released from cyanide complexes by means of a reflux-distillation and absorbed in a scrubber containing a sodium hydroxide solution. Tygon® tubing connects the reaction/distillation section to the absorption scrubber making set-up easier and less susceptible to glass breakage. Inlet tubes have funnel openings for easy addition of acid. Apparatus meets the requirements of E.P.A. SW-846 methods 9010 and 9012, and ASTM method D-2036. Designed for sample size of 500 mL.

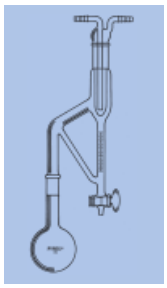
Cat. No.	Description	Qty/Cs
3350-1L	Two-Neck Boiling Flask, 1L	1
3350-C	Cyanide Distillation Apparatus, Complete	1
3350-CFCO	Cold Finger Condenser Only	1
3350-CJO	Condenser Jacket Only	1
3350-DTO	Dispersion Tube Only	1
3350-ITO	Inlet Tube Only	1
3350-TO	Trap Only	1

3360 PYREX® Brand, General Purpose, PYREX Stopper, ⧩ Joint

A general purpose batch distillation assembly with the facility for addition via the PYREX stoppered neck. Ideally suited for the batch production of high purity distilled water. The flask has a flat bottom with a side delivery tube, terminating in a joint. Graham condenser tubulations are 10 mm O.D.

Cat. No.	Description	Capacity (mL)	Cond. Jacket Length (mm)	⧩ Stopper No.	⧩ Joint Size	Qty/Cs
3360-500	Complete	500	200	27	19/38	1
3360-1L	Complete	1000	200	27	19/38	1
3360-500FO	SFO	500	–	27	–	1
3360-1LFO	SFO	1000	–	27	–	1

SFO: Stopper and Flask Only.
For stopper only, see Cat. No. 7650.
For condenser, see Cat. No. 2540-200.



3400 PYREX Brand, Volatile Oil Distilling Apparatus, Lighter Than Water, ⧩ Ground Joint

Designed for use with oils lighter than water. Apparatus consists of a Clevenger-type volatile oil trap and cold finger condenser with ⧩ 24/40 joints and long necked 250 mL round bottom flask. The trap is graduated to 5 mL in 0.1 mL increments.

Cat. No.	Description	Overall Height (mm)	Flask ⧩ Ground Joint	Qty/Cs
3400-1L	Complete Apparatus	315	29/42	1
3400-250	Complete Apparatus	315	24/40	1

3405 PYREX Brand, Volatile Oil Distilling Apparatus, Lighter Than Water

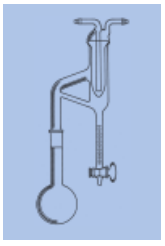
Designed for use with oils lighter than water. Apparatus consists of a plain Clevenger-type volatile oil trap graduated to 5.0 mL in 0.1 mL increments, cold finger condenser, and 250 mL round bottom flask with ⧩ 24/40 joint.

Cat. No.	Description	Overall Height (mm)	Qty/Cs
3405-250	Complete Apparatus	275	1

3410 PYREX Brand, Volatile Oil Distilling Apparatus, Heavier Than Water

Apparatus consists of a Clevenger-type volatile oil trap with a ⧩ 24/40 outer joint and a 29/42 inner joint on the sidearm, a long neck round bottom flask, and a cold finger condenser insert with a ⧩ 24/40 inner joint. Designed for use with oils heavier than water. Trap is graduated to 5 mL in 0.1 mL increments.

Cat. No.	Description	Approx. Overall Height (mm)	Capacity (mL)	Qty/Cs
3410-1L	Complete Apparatus	310	1000	1
3410-250	Complete Apparatus	300	250	1



3415 PYREX Brand, Volatile Oil Distilling Apparatus, Heavier Than Water

Apparatus designed for use with oils heavier than water. Consists of a Clevenger-type volatile oil trap graduated to 5 mL in 0.1 mL increments, cold finger condenser insert and long necked, round bottom flask with ⧩ 24/40 joint.

Cat. No.	Capacity (mL)	Approx. Overall Height (mm)	Qty/Cs
3415-250	250	270	1

3440 PYREX® Brand, Compact, Joint

A compact distillation assembly, incorporating a specially designed Friedrichs condenser, with a vapor tube rising to the top. Supplied with a joint between the Friedrichs condenser and the flask. The 1000 mL Erlenmeyer flask is supplied with an outer 34/45 joint. Condenser tubulations are 10 mm O.D.

Cat. No.	Description	Approx. Height (mm)	Cond. Outlet O.D. x Length (mm)	Qty/Cs
3440	Complete	495	8 x 175	1
3440-CO	Condenser Only	–	–	1
3440-FO	Flask Only	234	129	1

3560 PYREX Brand, Claisen Connecting Tube, West Condenser, Joints

Made in two parts. Consists of a special West condenser (500 mm jacket length) and a special Claisen connecting tube, both with joints. The side neck on the connecting tube has an outer 10/30 joint at the top for a thermometer. The tubulation size on the condenser is approximately 10 mm O.D.

Cat . No.	Description	Joint Size	Approx. Height (mm)	Qty/Cs
3560	Complete	24/40	225	1
3560-CO	Condenser Only	24/40	–	1
3560-TO	Tube Only	24/40	–	1

3575 PYREX Brand, Solvent Still Head

Apparatus for maintaining oxygen free solvents. Head has sufficient storage space to allow solvent removal by syringe or drainage through 2 mm T-bore Teflon stopcock. With 24/40 outer joint at top, 24/40 inner joint at bottom and 14/20 inner joint on drainage arm.

Cat. No.	Capacity (mL)	Approx. Overall Height (mm)	Qty/Cs
3575-250	250	245	1
3575-500	500	275	1

3582 PYREX Brand, Oil Dilution, Receiver, Joints

For determining the amount of dilution in crankcase oils when gasoline has been used as fuel. Designed to allow heat-sensitive materials to be kept away from the hot base of the flask. With an outer 24/40 joint at the top and an inner 24/40 joint on the sidearm. Reference: ASTM D-322.

Cat. No.	Capacity (mL)	Approx. Height (mm)	Grad. Interval (mL)	Qty/Cs
3582	5	380	0.1	1

3602 PYREX Brand, Dean Stark, Receiver, Joints

The 10 mL receiver is graduated from 0 to 1 mL in 0.1 mL intervals, with a maximum scale error of 0.05 mL. The graduation intervals from 1.0 to 10.0 mL are 0.2 mL, with a maximum scale error of 0.1 mL.

Cat. No.	Capacity (mL)	Inner and Outer Joint Size	Approx. Height (mm)	Qty/Pk	Qty/Cs
3602-10	10	24/40	216	1	4

Reference: ASTM E-123.

3611 PYREX® Brand, Moisture Test, Receiver, Ⓢ Joints

For determining water by distillation. Receivers have a Ⓢ 24/40 ground joint on the sidearm. The 10 mL receiver is graduated, from 0 to 1 mL, in 0.1 mL intervals, with a maximum scale error of 0.05 mL. Graduation intervals from 1.0 to 10.0 mL are 0.2 mL, with maximum scale error of 0.1 mL. The 25 mL receiver is graduated, from 0 to 1 mL, in 0.1 mL intervals, with a maximum scale error of 0.05 mL. Graduation intervals from 1.0 to 25.0 mL are 0.2 mL, with a maximum scale error of 0.1 mL.

Cat. No.	Capacity (mL)	Ⓢ Inner and Outer Joint Size	Approx. Height (mm)	Qty/Cs
3611-10	10	24/40	237	1
3611-25	25	24/40	317	1

Reference: ASTM E-123, which covers apparatus used in ASTM method D-95, *Test for Water in Petroleum Products and Other Bituminous Products*.

3622 PYREX Brand, Barrett, Receiver, Stopcock, Ⓢ Joints

For determining water content in petroleum or bituminous products, graduated upwards from the stopcock to 3 mL in 0.2 mL divisions, and from 3 mL to 20 mL in 0.5 mL divisions. Reference: Barrett method B-2. Also can be used as Dean Stark distillation apparatus specified in British Standard 756, but utilizes a common U.S. ground joint. It is also an optional setup for ASTM D-95.

Cat. No.	Capacity (mL)	Ⓢ Inner and Outer Joint Size	Approx. Height (mm)	Ⓢ Stopcock Plug No.	Qty/Pk	Qty/Cs
3622-20	20	24/40	228	1	2	4

EXTRACTION APPARATUS

3740 PYREX Brand, Soxhlet, Ⓢ Joints

Bulb in siphon tube near the top of tube facilitates cycling of the siphoning action. The siphon tube is protected from accidental damage by the vapor tube. Ⓢ joints at the top and bottom.

Cat. No.	Capacity to Top of Siphon (mL)	Ⓢ Inner Joint Size	Ⓢ Outer Joint Size	Approx. Height (mm)	Approx. Siphon to Plate (mm)	Chamber I.D. x Height (mm)	Qty/ Pk	Qty/ Cs
3740-S	50	24/40	34/45	295	62	29 x 130	1	2
3740-M	85	24/40	45/50	303	80	38 x 130	1	12
3740-XL	500	29/42	71/60	430	130	64 x 220	1	2

For glass extraction thimble with fritted disc only, See Cat. No. 33950.

3840 PYREX Brand, Soxhlet, Ⓢ Joints, Allihn Condenser

This apparatus consists of a Soxhlet extractor, an Allihn condenser and a flask, all equipped with Ⓢ joints. The tubulation O.D. on the condenser is 10 mm.

Cat. No.	Description	Capacity (mL)	I.D. Body Length (mm)	Extractor Ⓢ Joint Size Inner (Bottom)	Extractor Ⓢ Joint Size Outer (Top)	. Approx Height (mm)	Qty/ Cs
3840-S	Complete	125	27 x 192	24/40	34/45	655	1
3840-M	Complete	250	37 x 250	24/40	45/50	711	1
3840-L	Complete	500	46 x 305	24/40	55/50	803	1
3840-XL	Complete	1000	64 x 319	29/42	71/60	880	1
3840-SCO	Condenser Only	–	–	–	–	–	1
3840-MCO	Condenser Only	–	–	–	–	–	1
3840-LCO	Condenser Only	–	–	–	–	–	1
3840-XLCO	Condenser Only	–	–	–	–	–	1
3840-1LFO	Flask Only	1000	–	–	–	185	1

For extractor only, see Cat. No. 3740.
For flask only on sizes 125 thru 500 mL, see Cat. No. 4100.

3880 PYREX® Brand, Soxhlet, Friedrichs Condenser, ⅀ Joints

An efficient extraction apparatus for general purpose use. Consists of a Soxhlet extractor, a special Friedrichs condenser and a flask, all equipped with ⅀ joints. The condenser tubulation O.D. is 10 mm.

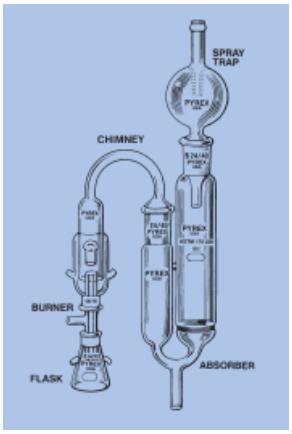
Cat. No.	Description	Capacity (mL)	I.D. x Body Length (mm)	⅀ Inner Joint Size	⅀ Outer Joint Size	Approx. Height (mm)	Qty/Cs
3880-M	Complete	250	40 x 205	24/40	45/50	665	1
3880-MCO	Condenser Only						1

For extractor only, see Cat. No. 3740.
For flask only, see Cat. No. 4100.

3900 PYREX Brand, Arsine Generator

Designed for arsenic determination by the silver diethyldithiocarbramate photometric method. Meets A.P.H.A. Standard 104A, ACS/USP and EPA specifications. Fabricated from PYREX borosilicate glass. Joint on 125 mL flask is 24/40 and ball and socket joint between absorber and scrubber is ⅀ 12/2. Complete unit includes clamp.

Cat. No.	Description	Qty/Pk	Qty/Cs
3900	Arsine Generator, Complete	–	1
3900-AO	Absorber Only	1	4
3900-SO	Scrubber Only	1	4
7721-13	Clamp Polyacetyl	–	10



37723 PYREX Brand, Sulfur Determination, Fritted Disc, ⅀ Joints

For the determination of sulfur in gasoline, kerosene, petroleum naphtha and other petroleum oils that can be burned completely in a wick lamp. **Reference: ASTM D-1266 except that fritted disc is 40-EC.**

Cat. No.	Description	Qty/Pk	Qty/Cs
37723	Apparatus Complete	–	1
37723-AO	Absorber Only	–	1
37723-BO	Burner Only	1	12
37723-CO	Chimney Only	–	1
37723-FO	Flask Only	–	1

38450 PYREX Brand, Chromatographic, Coarse Fritted Disc

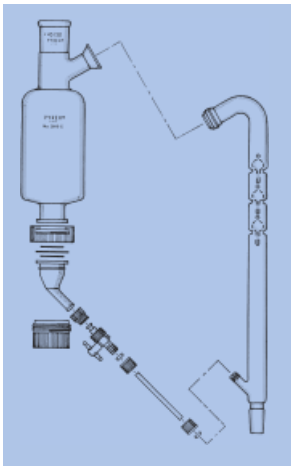
These tubes are designed for general chromatographic analysis. The tops are tooled for rubber stopper fit and the tubes are fabricated with sealed-in coarse porosity fritted discs. The outflow tubes are large in diameter to eliminate the smearing of the definition bands of effluent caused by the tube being filled, and the solvent mixed before being expelled. The outflow tubes are long enough to protrude through a rubber stopper.

Cat. No.	Approx. I.D. x Length (mm)	Approx. Stopper No.	Qty/Pk	Qty/Cs
38450-10	10.5 x 300	00	1	8
38450-20	22.0 x 400	4	1	6
38450-40	44.0 x 600	10	–	1

38452 PYREX Brand, Chromatographic, Coarse Fritted Disc, ⅀ Teflon Stopcock

The column is designed for genreal chromatographic column separations. The top is tooled for a rubber stopper fit. A ⅀ Teflon® stopcock is provided for better column control. Sealed into the column in a coarse porosity fritted disc. The volume below the disc is minimized to prevent mixing and to allow clear, sharp, band definition.

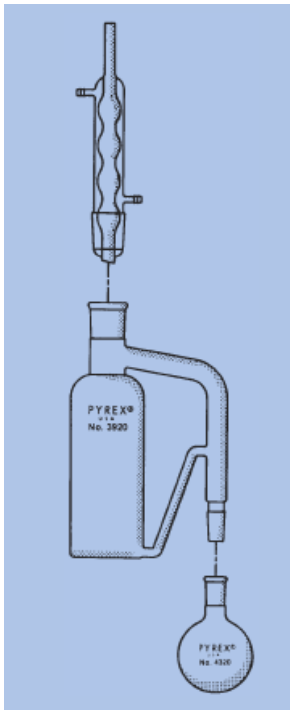
Cat. No.	Approx. I.D. x Length (mm)	Approx. Stopper No.	Stopper Plug Size	Qty/Pk	Qty/Cs
38452-10	10 x 300	00	2	2	4



3915-C PYREX® Brand, Accelerated One-Step, Modular

This revolutionary modular PYREX Accelerated One-Step™ extractor/concentrator performs extraction, concentration, and drying with the same apparatus and is designed for use with solvents of heavier specific gravity than sample being extracted. The required concentrator tube (2157-100T or 2157-100TJ) and the Allihn condenser (3840-MCO) must be purchased separately. Removable Snyder column sidearm allows easy cleaning. Meets the requirements of EPA SW-846 method 3520 and EPA Waste Water method 625 allowed in CLP statement of work OLMO2.0 for semi-volatiles and pesticides. Extraction and concentration steps can be performed outside the hood. However, as dictated by safe laboratory practices, we recommend that some type of ventilation system be used above or near the units in case of a drop in condenser water temperature or loss of condenser cold water supply. Covered by U.S. Patent Nos. 5268150 and 5,373,620.

Cat. No.	Description	Qty/Pk	Qty/Cs
3915-C	Accelerated One-Step™ Extractor/Concentrator	–	1
2140-35	Ball Joint Clamp, ℘ 35/25	–	1
2157-100T	Concentrator Tube, 100 mL, Threaded Tubulations, ⧩ 24/40	–	1
2157-100TJ	Concentrator Tube, Jacketed, 100 mL, Threaded Tubulations, ⧩ 24/40	–	1
2158-CO	Hose Connectors, Jacketed Concentrator Tube	2	6
3840-MCO	Condenser, Allihn, Medium, ⧩ 45/50	–	1
3915-35VO	O-Rings, Viton® ℘ 35/25, 1" ID, 1 3/16" OD, 3/32" Width, 75 Durometer	6	24
3915-CAO	Coupler Assembly Only, Top/Bottom	2	6
3915-CVO	O-Rings, Viton Coupler, 1 1/2" ID, 1 11/16" OD, 3/32" Width, 75 Durometer	6	24
3915-CW	Connectors/Washers Only, for Stopcock Assembly, Melamine Connectors,Teflon Liners, Silicon Washers	2	6
3915-ECO	Extractor Cup Only	–	1
3915-MBO	Extractor Body Only, ⧩45/50 Top, ℘35/25 Side	–	1
3915-MSCO	Snyder Sidearm Only, Top ℘ 35/25 with Viton® O-Ring, Lower ⧩24/40	–	1
3915-SCA	Stopcock Assembly Only	–	1
3918-47	Membrane Assembly, 47 mm	–	20
3918-47BP	Membrane Assembly, 47 mm Bulk Pack	–	200
3918-47MS	Photoceram™ Membrane Support Only, for 47 mm Membrane	–	2

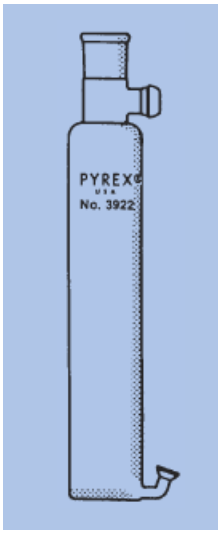


3920-M PYREX Brand, Continuous Liquid/Liquid Extractor, Complete, Heavier Than Water, One-Piece

PYREX brand continuous liquid/liquid extractor is designed to meet E.P.A. test method requirements outlined by SW-846, RCRA, and CLP. For use with solvents of heavier specific gravity than sample liquid being extracted. The sidearm is sealed to the extractor body just below the ⧩ 45/50 ground joint. The sidearm is sealed higher on the body to reduce the chance of water spilling over while draining remaining solvent from extractor body at the end of the extraction. Extraction can be performed outside the hood.† Comes complete with PYREX brand Allihn condenser and 500 mL PYREX brand round bottom boiling flask. †**As dictated by safe laboratory practices, we recommend that some type of ventilation system be used above or near the units in case of a drop in condenser water temperature or loss of condenser cold water supply.**

Cat. No.	Description	Capacity (mL)	Extractor Body Approx. Height (mm)	Extractor Body Approx. Width (mm)	Total Approx. Height (mm)	Qty/ Cs
3920-M		1000	355	214	710	1
3840-MCO	Allihn Condenser	–	–	–	–	1
3920-MBO	Extractor Body, ⧩ 45/50 Top, ⧩ 24/40 Bottom	–	–	–	–	1
4320-500	Round Bottom Flask 500 mL, ⧩ 24/40	–	–	–	–	12

3922 PYREX® Modular 1L Continuous Heavier than Water Liquid/Liquid Extractor or Liquid/Liquid Extractor/Concentrator Systems



These versatile modular 1L PYREX® continuous extractor systems are for use with solvents of heavier specific gravity than sample liquid being extracted. Using modular components make these components easier to clean and maintain and gives more flexibility. These systems are designed to meet EPA test method requirements outlined by SW-846, RCRA, and CLP. Extraction can be performed outside the hood. However, as dictated by safe laboratory practices, we recommend that some type of ventilation system be used above or near the units in case of a drop in condenser water temperature or loss of condenser cold water supply.

Because this system uses modular components it can be configured as two different systems:

- The **Continuous Liquid/Liquid Extractor** uses a plain Column Sidearm (Cat. No. 3928-MSAO) and 500 mL Round Bottom Flask (Cat. No. 4320-500). The crossover tube is fitted with a Teflon® stopcock to impede flow to the round bottom flask when changing over from base or neutral extractions to acidic extractions or at the end of the run.
- The **Continuous Liquid/Liquid Extractor/Concentrator** uses a Snyder Column Sidearm (Cat.No. 3928-MSCO) and a Kuderna-Danish Flask (Cat. No. 2158-500FO) with a Collection Tube (Cat. No. 2158-500FO). Allows the use of the same solvent for both basic and acidic extractions. This system does not require an apparatus change to switch from extracting to concentrating. As a result, it reduces sample handling and overall technician time required.

Assembling the complete system requires purchasing 8 separate components: the extractor body, a condenser, a crossover tube, a sidearm column and a receiver flask as well as small and large ball joint clamps and Viton O-rings.

Cat. No.	Description (Components required to assemble a complete system)	Qty/ Pk	Qty/ Cs
3922-MBO	Modular 1L Extractor Body with a ⧩ 45/50 outer Standard Taper top joint, ⧩ 35/25 middle inner Spherical Ball joint, and ⧩ 18/19 outer Spherical Ball joint. 520 mm x 254 mm (height x width)	–	1
3840-MCO	PYREX Allihn Condenser with a 45/50 inner Standard Taper joint and 10mm O.D. on the tubulations	–	1
3928-MCTO	Modular Crossover Tube with Stopcock Valve with two ⧩ 18/19 inner Spherical Ball joints with Viton O-Rings (Requires two ⧩ 18/19 Spherical Ball Joint Clamps for assembly – Cat. No. 2140-18)	–	1
3922-MSAO	Modular Sidearm Column with a ⧩ 35/25 top outer Spherical Ball joint, and ⧩ 18/19 outer Spherical Ball joint and ⧩ 24/40 inner Standard Taper bottom joint	–	1
3928-MSCO	Modular One-Step Snyder Column with a ⧩ 35/25 top outer Spherical Ball joint, and ⧩ 18/19 outer Spherical Ball joint and ⧩ 24/40 inner Standard Taper bottom joint	–	1
4320-500	500 mL Round Bottom Collection Flask with a ⧩ 24/40 outer Standard Taper joint	2	12
2158-500FO	500 mL Kuderna-Danish Flask with a ⧩ 24/40 outer Standard Taper top and a ⧩ 19/22 inner Standard Taper bottom joint. Includes springs and Keck Clamps for both joints	–	4
2157-10TO	10mL tubes Kuderna Danish Collection Tubes with a ⧩ 19/22 outer Standard Taper joint and graduations from 0 to 2 mL in 0.1 mL increments and from 3 mL to 10 mL in 1.0 mL increments. Please note: there are other styles and sizes of K-D Collection Tubes that can be used the 500 mL K-D Flask.	1	6
2140-18	Clamps for ⧩ 18/19 Spherical Ball Joints	1	2
2140-35	Clamps for ⧩ 35/25 Spherical Ball Joints	–	1
7681-6	Replacement Stopcock Assembly with a 6 mm diameter bore for the Modular Crossover Tube	–	1
7705	Replacement Viton O-Rings, five 1/2" O.D., and five 11/16" O.D. rings each 3/32" in thickness, 70 Durometer	–	10

9601 PYREX® Brand, Reaction, Combination Vessel and Receiver

This tube may be used for simple semi-micro vacuum or atmospheric distillation, either as a reaction flask or a receiving tube.

Cat. No.	Joint Size	Approx. Length (mm)	Qty/Cs
9601-24	24/40	200	1

*This tube is also a replacement part for organic chemistry kit No. 6949.

EVAPORATOR TRAPS

4000 PYREX Brand, Evaporator

Used in rotary evaporators. Consists of a round body with upper and lower stems. The lower stem, with joint at bottom, extends upward inside the body. The closed top of this stem has two side openings. The upper stem has a 24/40 outer joint.

Cat. No.	Capacity (mL)	Lower Joint	Approx. O.D. x Height (mm)	Qty/Cs
4000-10014	100	14/20	62 x 160	1
4000-10019	100	19/22	62 x 162	1
4000-10024	100	24/40	62 x 180	1
4000-25014	250	14/20	81 x 177	1
4000-25019	250	19/22	81 x 179	1
4000-25024	250	24/40	81 x 199	1
4000-50014	500	14/20	98 x 194	1
4000-50024	500	24/40	98 x 214	1
4000-1L24	1000	24/40	130 x 248	1

FIBER GLASS

3950 PYREX Brand, Code No. 9989 Glass

This fiber glass is made from fine glass fibers with diameters controlled to approximately 0.008 mm. This makes the glass pliable and easy to use. Manufactured from Code No. 9989 glass, this fiber glass contains minimal heavy metals and is suitable for use as a filtering medium. Supplied in the form of roving approximately 2 inches in diam. x 22 ft. long. Packaged in 0.23 kg. (0.5 lb.) bags. Not sold in quantities of less than 0.46 kg. (1 lb.).

Cat. No.	Pk/Cs	Qty/Cs
3950	1 lb./2 bags	12 lb./24 bags

FILLING BELL

3960 PYREX Brand, Filling Bell

For use with culture tubes and bottles. The smaller size will fit tubes up to 20 mm O.D. (without lip). The larger size can be used on bottles with maximum rim diameter of 44 mm.

Cat. No.	Approx. Height (mm)	Tubulation O.D. (mm)	Qty/Cs
3960-S	70	7	1
3960-L	85	11	1

3965 PYREX® Brand, Filling Bell, Aseptic

For aseptic filling of vessels. Rubber tubing is attached to the top of the tubulation while the receiving vessel is placed inside the bell.

Cat. No.	For Use with	Description	Tubulation O.D. (mm)	Dimensions O.D. x Height (mm)	Qty/Cs
3965-20	Tubes	Filling Bell	7.0	28 x 75	2
3965-40	Tubes	Filling Bell	10.0	41 x 95	2
3965-50	Bottles	Filling Bell	11.0	51 x 95	2
3965-70	Bottles	Filling Bell	11.0	73 x 130	2
3965-100	Bottles	Filling Bell	12.7	109 x 140	2

3970 PYREX Brand, Filling Bell, Aseptic, Luer Lock Style

Luer lock style for filling very small necked flasks aseptically using syringe needles. Standard or plastic syringes (not included) attach to luer fitting to dispense uniform droplets into receiving vessel.

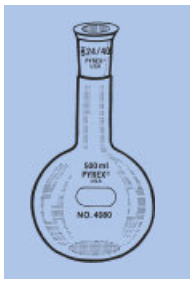
Cat. No.	Description	Tubulation O.D. (mm)	Dimensions O.D. x Height (mm)	Qty/Cs
3970-20	Filling Bell	11.0	20 x 80	2
3970-38	Filling Bell	11.0	41 x 95	2
3970-50	Filling Bell	11.0	51 x 95	2
3970-70	Filling Bell	11.0	70 x 130	2
3970-100	Filling Bell	12.7	109 x 140	2

FLASKS

4060 PYREX Brand, Florence, Boiling, Flat Bottom, Long Neck, Tooled Mouth

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4060-50	50	1	50 x 94	–	1
4060-125	125	2	68 x 120	6	24
4060-250	250	5	82 x 134	6	24
4060-500	500	6	103 x 174	6	24
4060-1L	1000	8	132 x 213	–	6
4060-2L	2000	8	168 x 293	–	1
4060-6L	6000	11	237 x 367	–	1
4060-12L	12000*	11	297 x 371	–	1

*The 12000 mL size has a short neck.



4080 PYREX Brand, Florence, Boiling, Flat Bottom, Long Neck, Ʃ Joint

With full length outer Ʃ joints.

Cat. No.	Capacity (mL)	Ʃ Joint Size	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4080-250	250	24/40	82 x 154	6	12
4080-500	500	24/40	103 x 195	6	12

4100 PYREX Brand, Boiling, Flat Bottom, Short Neck, Ʃ Joint

With full length outer joints, but with shorter necks.

Cat. No.	Capacity (mL)	Ʃ Joint Size	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4100-50	50	24/40	50 x 98	–	1
4100-125	125	24/40	69 x 120	–	12
4100-250	250	24/40	82 x 135	6	12
4100-500	500	24/40	103 x 155	6	12
4100-1L	1000	24/40	132 x 185	1	12

4260 PYREX® Brand, Boiling, Round Bottom, Short Ring Neck

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4260-250	250	5	83 x 120	–	1
4260-500	500	6	102 x 160	–	1
4260-1L	1000	8	130 x 185	6	12
4260-2L	2000	10	162 x 232	1	18
4260-3L	3000	10	184 x 260	–	1
4260-5L	5000	11	221 x 310	–	6
4260-12L	12000	11	295 x 378	–	1
4260-22L	22000	14	349 x 426	–	1

4280 PYREX Brand, Boiling, Round Bottom, Long Neck, Tooled Mouth

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4280-100	100	2	65 x 120	12	84
4280-250	250	5	83 x 149	–	1
4280-500	500	6	102 x 203	6	12
4280-1L	1000	8	130 x 241	6	30
4280-2L	2000	8	161 x 308	1	18
4280-5L	5000	11	221 x 380	1	6

4315 PYREX Brand, Flask, Pear-Shaped

These flasks are equipped with ⅋ 14/20 outer joint.

Cat. No.	Capacity (mL)	⅋ Joint Size	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4315-5	5	14/20	25 x 50	–	1
4315-6	6	14/20	24 x 55	–	1
4315-10	10	14/20	31 x 58	2	12
4315-15	15	14/20	32 x 63	–	1
4315-20	20	14/20	38 x 66	–	1
4315-25	25	14/20	40 x 78	2	12
4315-35	35	14/20	46 x 80	–	1
4315-50	50	14/20	46 x 87	2	12
4315-65	65	14/20	53 x 86	–	1
4315-75	75	14/20	55 x 80	–	1
4315-100	100	14/20	60 x 115	–	1

4316 PYREX Brand, Flask, Pear-Shaped

These flasks are equipped with ⅋ 19/22 joint.

Cat. No.	Capacity (mL)	Qty/Cs
4316-25	25	1
4316-100	100	1

4318 PYREX Brand, Flask, Pear-Shaped

These flasks are equipped with a ⅋ 24/40 joint.

Cat. No.	Capacity (mL)	Qty/Cs
4318-50	50	1
4318-100	100	1
4318-150	150	1
4318-200	200	1
4318-250	250	1

4320 PYREX® Brand, Boiling, Round Bottom, Short Neck, ⅋ Joint

With full length joints, but with short necks.

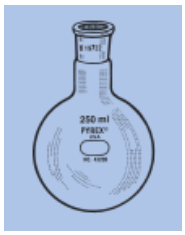
Cat. No.	Capacity (mL)	⅋ Joint Size	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4320-50	50	19/38	49 x 98	2	12
4320-100	100	24/40	65 x 120	2	12
4320-250	250	24/40	83 x 140	2	12
4320-500	500	24/40	102 x 160	2	12
4320-1L	1000	24/40	127 x 189	1	12
4320-2L	2000	24/40	162 x 220	1	6
4320-5L	5000	45/50	221 x 300	1	4
4320-12L	12000	55/50	295 x 385	–	1
4320-300	300	24/40	87 x 145	2	12

The 100, 250, and 500 mL flasks are replacement parts for organic chemistry kits Cat. Nos. 6949-6949K.

4320A PYREX Brand, Boiling, Round Bottom, Short Neck, ⅋ Joint

Cat. No.	Capacity (mL)	Joint Size	Approx. O.D. x Height (mm)	Qty/Cs
4320A-50	50	24/40	49 x 98	12

4320B PYREX Brand, Boiling, Round Bottom, Short Neck, ⅋ Joint



Cat. No.	Capacity (mL)	⅋ Joint Size	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4320B-25	25	19/22	42 x 72	–	1
4320B-50	50	19/22	49 x 81	–	1
4320B-100	100	19/22	65 x 95	2	12
4320B-250	250	19/22	83 x 120	–	1
4320B-500	500	19/22	102 x 139	–	1

These flasks are replacement parts for organic chemistry kits Cat. Nos. 6949-6949K.

4320C PYREX Brand, Boiling, Round Bottom, Short Neck, Heavy Wall, ⅋ Joint

PYREX heavy duty boiling flask provides increased mechanical strength. The flask features walls which are 25-30% thicker than the standard version. O.D. dimensions have not been changed.

Cat. No.	Capacity (mL)	⅋ Joint Size	Approx. O.D. x Height (mm)	Qty/Cs
4320C-50	50	24/40	49 x 61	1
4320C-100	100	24/40	65 x 120	1
4320C-250	250	24/40	83 x 140	1
4320C-500	500	24/40	102 x 160	1
4320C-1L	1000	24/40	127 x 189	1
4320C-2L	2000	24/40	162 x 215	1
4320C-3L	3000	24/40	189 x 255	1
4320C-5L	5000	45/50	221 x 300	1
4320C-12L	12000	55/50	295 x 385	1

4321 PYREX® Brand, Boiling, Round Bottom, Short Neck, Ⓢ Joint

Cat. No.	Capacity (mL)	Ⓢ Joint Size	Approx. O.D. x Height (mm)	Qty/Cs
4321-50	50	29/42	49 x 98	1
4321-100	100	29/42	63 x 120	1
4321-250	250	29/42	83 x 140	1
4321-500	500	29/42	102 x 157	1
4321-1L	1000	29/42	130 x 185	1
4321-2L	2000	29/42	162 x 217	1

4321A PYREX Brand, Boiling, Round Bottom, Short Neck, Ⓢ Joint

Cat. No. Qty/Cs	Capacity (mL)	Ⓢ Joint Size	Approx. O.D. x Height (mm)	Qty/Pk
4321A-5	5	14/20	26 x 52	212
4321A-10	10	14/20	31 x 57	212
4321A-25	25	14/20	42 x 70	–1
4321A-50	50	14/20	49 x 84	–1
4321A-100	100	14/20	65 x 95	112
4321A-250	250	14/20	83 x 114	–1
4321A-500	500	14/20	102 x 137	–1

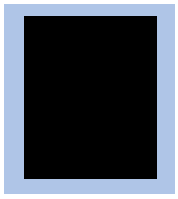
4323 PYREX Brand, Boiling, Round Bottom, Short Neck, Ⓢ Joint with Thermometer Well with Ⓢ 14/22 joint

Cat. No.	Capacity (mL)	Ⓢ Joint Size	Approx. O.D. x Height (mm)	Qty/Cs
4323-500	500	24/40	102 x 160	1
4323-1L	1000	24/40	130 x 185	1
4323-2L	2000	24/40	162 x 215	1

4323A PYREX Brand, Boiling, Round Bottom, Short Neck, Side Tubulation

Cat. No.	Capacity (mL)	Ⓢ Joint Size	Approx. O.D. x Height (mm)	Qty/Cs
4323A-250	250	19/22	83 x 128	1

4420 PYREX Brand, Fernbach, Culture



This wide mouth flask is designed for culturing organisms requiring a large surface area to volume ratio. It can also be used in serum production.

Cat. No.	Capacity (mL)	Approx. Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Cs
4420-2XL	2800	13-14	205 x 230	6

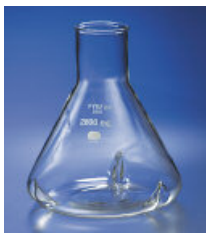
Reference: *Industrial and Engineering Chemistry*, Vol. 21, No. 12, P. 1198. Note: Do not use this flask on a heat source smaller than the base of the flask. Uneven heating of the flask could cause breakage.

4422 PYREX Brand, Culture, Low Form

This narrow mouth flask is designed for culturing organisms requiring a large surface area to volume ratio. The neck O.D. is 38 mm.

Cat. No.	Capacity (mL)	Approx. Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Cs
4422-2XL	2500	6.5	254 x 197	1

Do not use this flask on a heat source smaller than the base of the flask. Uneven heating of the flask could cause breakage.

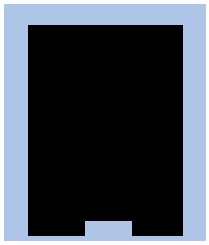


4423 PYREX® Brand, Fernbach Culture Flask, Baffled, Beaded Neck

This wide-mouth flask is designed for culturing organisms requiring a large surface area to volume ratio. Triple baffled on the bottom outside edges to achieve maximal oxygen transfer to culture medium. Beaded neck is 63mm I.D. and accepts cotton plugs or rubber stoppers.

Cat. No.	Capacity (mL)	Description	Rubber Stopper No.	Dimensions O.D. x Height (mm)	Qty/Cs
4423-2XL	2800	Culture Flask	13	200 x 230	3

Do not place on a direct heat source.



4424 PYREX Brand, Fernbach Culture Flask, Baffled, Plain Neck

This triple baffled flask has a Delong style 38 mm neck for plastic or stainless steel closures. Triple baffles are located at the center of the flask bottom to achieve maximal oxygen transfer to culture medium. Closures are sold separately.

Cat. No.	Description	Capacity (mL)	Neck O.D. (mm)	Dimensions O.D. x Height (mm)	Qty/Cs
4424-2XL	Culture Flask with 38 mm O.D. Neck	2800	38	200 x 260	3

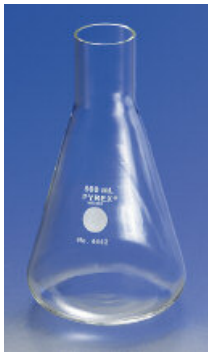
Caution: Do not place on a direct heat source.

4425 PYREX Brand, Fernback Culture Flask, Baffled, with Screw Cap

This wide mouth flask is designed for culturing organisms requiring a large surface area to volume ratio. Triple baffled on the bottom outside edges to achieve maximal oxygen transfer to culture medium. Supplied with GL45 orange polypropylene cap.

Cat. No.	Description	Capacity (mL)	Dimensions O.D. x Height (mm)	Qty/Cs
4425-2XL	Culture	2800	200 x 230	3

Note: For replacement caps, see Cat. No. 1395-45LTC.
Caution: Do not place on a direct heat source.



4442 PYREX Brand, Culture, Long Neck

The long neck culture flask is basically an Erlenmeyer flask to which a long straight, rimless neck of heavy tubing has been added. The longer necks reduce the amount of splashed solution reaching the closure. It is ideal for shaker cultures.

Cat. No.	Description	Approx. O.D. x Height (mm)	Approx. Neck O.D. (mm)	Qty/Pk	Qty/Cs
4442-50	Flask 50 mL	50 x 105	18	6	24
4442-125	Flask 125 mL	66 x 122	25	6	24
4442-250	Flask 250 mL	81 x 138	38	6	24
44442-500	Flask 500 mL	101 x 181	38	–	1
4442-1L	Flask 1000 mL	129 x 216	38	–	1
4442-2L	Flask 2000 mL	160 x 285	38	–	1
26794-25*	Closure, Orange	–	25	50	100
26795-25*	Closure, Natural	–	25	50	100
26796-38**	Closure, Orange	–	38	50	100
26797-38**	Closure, Natural	–	38	50	100

*Closure fits 125 mL size.
**Closure fits 250, 500, 1L, 2L.

4443 PYREX® Brand, Biometer, Flask, PYREX #2 Stopcock

Used to measure production of carbon dioxide produced by microorganisms grown on a variety of culture medium over longer periods of time. Minimizes the need for commonly used gas trains. Also useful in Bioremediation studies.Supplied complete with #6 rubber stopper in flask neck #7 rubber stopper in the side tube and 16 ga. needle.

Cat. No.	Description	Approx. Overall Height (mm)	Qty/Cs
4443-250	Flask Complete, 250 mL	–	1
4443-250FO	Flask Only, 250 mL	140	1
4443-TO	Delivery Funnel with stopcock and cap	144	1
4443-NO	Needle Only, 16 ga.	–	1

4444 PYREX Brand, Baffled Shaker

Delong style, with three baffle indents designed to provide greater agitation of solutions to improve oxygen or gas transfer when used with rotary or reciprocating shakers. Long neck reduces splashing and is designed for two-position polypropylene closures.

Cat. No.	Description	Neck O.D. (mm)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4444-125	Flask, 125 mL	25	70 x 140	–	6
4444-250	Flask, 250 mL	38	85 x 155	–	6
4444-500	Flask, 500 mL	38	100 x 200	–	6
4444-1L	Flask, 1000 mL	38	130 x 240	–	6
4444-2L	Flask, 2000 mL	38	160 x 282	–	1
4444-4L	Flask, 4000 mL	38	210 x 350	–	1
26794-25	Closure, Orange	25	–	50	100
26795-25	Closure, Natural	25	–	50	100
26796-38	Closure, Orange	38	–	50	100
26797-38	Closure, Natural	38	–	50	100

4446 PYREX Brand, Shaker Flask, Extra-Deep Baffles

Delong style neck, with three extra-deep baffles, to enhance gas transfer when used with rotary or reciprocating shakers. Long neck reduces splashing and is designed for two-position polypropylene closures. Closures are sold separately.

Cat. No.	Description	Approx. O.D. x Height (mm)	Approx. Neck O.D. (mm)	Qty/Cs
4446-50	Flask 50 mL	51 x 106	18	12
4446-125	Flask 125 mL	67 x 140	25	12
4446-250	Flask 250 mL	82 x 147	38	12
4446-300	Flask 300 mL	89 x 155	38	12
4446-500	Flask 500 mL	101 x 200	38	12
4446-1L	Flask 1000 mL	129 x 240	38	6
4446-2L	Flask 2000 mL	160 x 282	38	3
4446-3L	Flask 3000 mL	185 x 327	38	2
4446-4L	Flask 4000 mL	206 x 350	38	2

4450 PYREX Brand, Shaker Flask, Baffled

Heavy tooled rim for maximum durability. The same baffle design as found on our Delong flasks promotes optimal and consistent solution agitation when used with flask shakers.

Cat. No.	Capacity (mL)	Approx. O.D. x Height. (mm)	Rubber Stopper No.	Qty/Cs
4450-125	125	70 x 115	5	6
4450-250	250	85 x 155	6	6
4450-500	500	100 x 180	7	6
4450-1L	1000	130 x 220	8.5	1

4460 PYREX® Brand, Trypsinizing Flask, Beaded Neck, Baffled

Flasks are used for converting homogenous tissue samples into cell suspensions by digestion of connective proteins. Heavy beaded neck accepts cotton plugs. Four extra-deep baffles enhance vigorous agitation.

Cat. No.	Description	Approx O.D. x Height (mm)	Height of Baffles (mm)	Qty/Cs
4460-50	Flask, 35 mL	51 x 77	30	3
4460-125	Flask, 75 mL	67 x 102	50	3
4460-250	Flask, 50 mL	82 x 130	70	3
4460-500	Flask, 300 mL	101 x 167	95	3
4460-1L	Flask, 700 mL	129 x 204	105	2
4460-2L	Flask, 1500 mL	160 x 290	125	2

4462 PYREX Brand, Trypsinizing Flask, with Sidearm, Plain Neck, Baffled

Delong style neck on flask and sidearm to accommodate plastic closures. Designed with a well below the sidearm to prevent unseparated tissues from being poured out of the flask. Four extra long, extra deep baffles promote vigorous agitation. Flasks are used for converting homogenous tissue samples into cell suspensions by digestion of connective tissues.

Cat. No.	Description	Approx. O.D. x Height (mm)	Height of Baffles (mm)	Ctr. Neck O.D. (mm)	Qty/Cs
4462-50	Flask, 35 mL	51 x 105	30	18	3
4462-125	Flask, 75 mL	67 x 135	45	25	3
4462-250	Flask, 150 mL	82 x 155	70	38	3
4462-500	Flask, 300 mL	101 x 200	95	38	3
4462-1L	Flask, 700 mL	129 x 255	105	38	2
4462-2L	Flask, 1500 mL	160 x 290	125	38	2

4465 PYREX Brand, Trypsinizing Flask, with Sidearm, Screw Caps, Baffled

Flasks are used for converting homogenous tissue samples into cell suspensions by digestion of connective proteins. Phenolic screw cap with rubber liner on neck and sidearm. Designed with well below sidearm to prevent unseparated tissues from being poured out of flask. Four extra long, extra deep baffles promote vigorous agitation.

Cat. No.	Description	Height of Baffles (mm)	Ctr. Neck G.P.I.	Sidearm G.P.I.	Qty/Cs
4465-125	Flask, 75 mL	50	33-430M	20-415	3
4465-250	Flask, 150 mL	45	38-430M	20-415	3
4465-500	Flask, 300 mL	95	38-430M	20-415	3

Note: For replacement caps, see Corning Cat. No. 9999-381M.

4500 PYREX Brand, Glass Spinner Flask Complete, Baffled, Angled Sidearms

Baffled to enhance agitation of the contents of the flask. Dynamic Vortex impellers ensure high performance stirring. Wide, angled sidearms permit easier entry of 25 mL and 50 mL pipets for feeding and harvesting.

Cat. No.	Description	Capacity	Center Neck (mm)	Sidearm Neck (mm)	Qty/Cs
4500-125	Spinner	125 mL	70	32	1
4500-250	Spinner	250 mL	70	32	1
4500-500	Spinner	500 mL	100	45	1
4500-1L	Spinner	1L	100	45	1
4500-3L	Spinner	3L	100	45	1
4500-6L	Spinner	6L	100	45	1
4500-8L	Spinner	8L	100	45	1
4500-15L	Spinner	15L	100	45	1
4500-36L	Spinner	36L	100	45	1

4502 PYREX® Brand, Glass Spinner Flask Complete, Baffled, Wide Mouth, Angled Sidearms

Baffled to enhance agitation of the contents of the flask. Dynamic Vortex impellers ensure high performance stirring. Center neck is 120 mm for ease in setup and cleaning. The wide 45 mm angled sidearms permit easier entry of 25 mL and 50 mL pipets for feeding and harvesting.

Cat. No.	Description	Capacity	Center Neck (mm)	Sidearm Neck (mm)	Qty/Cs
4502-3L	Spinner	3L	120	45	1
4502-6L	Spinner	6L	120	45	1
4502-8L	Spinner	8L	120	45	1
4502-15L	Spinner	15L	120	45	1
4502-36L	Spinner	36L	120	45	1

4504 PYREX Brand, Glass Spinner Flask Complete, Baffled, Wide Mouth, Angled Sidearms

Baffled to enhance agitation of the contents of the flask. Dynamic Vortex impellers ensure high performance stirring. Extra-wide center neck is 140 mm for ease in setup and cleaning. The wide 45 mm angled sidearms permit easier entry of 25 mL and 50 mL pipets for feeding and harvesting. Unique Shur-Lok® cap design on center neck has a compression gasket to ensure a tight seal of the flask that can be visually confirmed after autoclaving.

Cat. No.	Description	Capacity	Center Neck (mm)	Sidearm Neck (mm)	Qty/Cs
4504-3L	Spinner	3L	140	45	1
4504-6L	Spinner	6L	140	45	1
4504-8L	Spinner	8L	140	45	1
4504-15L	Spinner	15L	140	45	1
4504-36L	Spinner	36L	140	45	1

4510/4512/4514 PYREX Brand, Glass Spinner Flask Only, Baffled, Vertical Sidearms

Baffled to enhance agitation of the contents of the flask. Extra wide center neck for ease in setup and cleaning. Center neck accepts a Shur-Loc® cap with compression gasket to ensure a tight seal that can be visually confirmed after autoclaving. Vertical sidearms with 45 mm openings can be used with sideport fitting and Direct Drive Stirring Mechanisms.

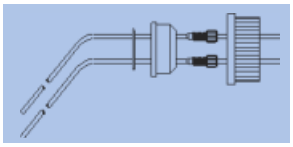
Cat. No.	Description	Capacity	Center Neck (mm)	Number of Sidearms	Qty/Cs
4510-8L	Spinner Flask Only	8L	100	4	1
4510-15L	Spinner Flask Only	15L	100	4	1
4510-36L	Spinner Flask Only	36L	100	6	1
4512-8L	Spinner Flask Only	8L	120	4	1
4512-15L	Spinner Flask Only	15L	120	4	1
4512-36L	Spinner Flask Only	36L	120	6	1
4514-15L	Spinner Flask Only	15L	140	4	1
4514-36L	Spinner Flask Only	36L	140	6	1

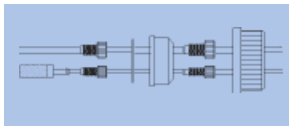
Note: For appropriate direct drive cap adapter and high performance paddle assemblies, see Cat. No. 4515.

4515 Paddle and Cap Assemblies for PYREX Brand Baffled Flasks

For use with Corning Cat. Nos. 4510, 4512, and 4514 series flasks coupled to a direct drive mechanism. Paddle assemblies will couple to 100, 120 or 140 mm cap assemblies. The 4515-CAO cap has been modified to mate with a Bellco 7764-10100 overhead drive shaft.

Cat. No.	Description	For Use w/Flask	Qty/Cs
4515-8L	Paddle Assembly	8000	1
4515-15L	Paddle Assembly	15000	1
4515-36L	Paddle Assembly	36000	1
4515-CAO	Center Neck	Bellco ODS Cap Adapter	1





4519 Accessories for PYREX® Brand Spinner Flasks

All fittings made of rugged PET with compression fittings and ferrules made of Noryl® and are designed to fit standard 45 mm (GL-45) screw threads on ProCulture™ vessels. Securing caps are made of native polypropylene. Vent cap (Cat. No. 4519-108) screw threads will accept most standard 50 mm 0.2 micron PTFE disposable filters. Media handling and gas delivery tubes are made of 316L stainless steel. Sensor fittings will accept most 12 mm insertion probes. O-ring are made of Viton.®

Cat. No.	Description	Qty/Cs
4519-100	Gas Delivery Fitting 1/8" inlet	1
4519-102	Gas Delivery Fitting 1/4" inlet	1
4519-104	Combo Dely/Vent Fitting 1/8" inlet, 1/4" vent	1
4519-106	Vent Cap Fitting with 50 mm PTFE Filter	1
4519-108	Sensor Fitting for 12 mm O_2 Insertion Probes	1
4519-110	Sensor Fitting for 12 mm pH Insertion Probes	1
4519-112	Dual 1/8" Media Handling Fittings for 8 and 15L Flasks	1
4519-114	Dual 1/8" Media Handling Fitting for 36L Flasks	1
4519-116	Dual 1/4" Media Handling Fitting for 8 and 15L Flasks	1
4519-118	Dual 1/4" Media Handling Fitting for 36L Flasks	1
4519-120	Combo 1/8" and 1/4" Media Handling Fitting for 8 and 15L Flasks	1
4519-122	Combo 1/8" and 1/4" Media Handling Fitting for 36L Flasks	1
4519-124	Media Handling Fitting 1/2" for 8 and 15L Flasks	1
4519-126	Media Handling Fitting 1/2" for 36L Flasks	1
4519-128	Sensor Fitting for 12 mm Temp Insertion Probes	1
4519-130	Center Neck Cap Compression Fitting Assembly 1/8" for 8 and 15L Flasks	1
4519-134	Center Neck Cap Compression Fitting Assembly 1/4" for 8 and 15L Flasks	1

Note: For other accessories, visit Corning at www.corning.com/lifesciences.

4620 PYREX Brand, Distilling

The sidearm on all sizes, except 125 mL, is approximately 77 mm below the top of the neck at an angle of 75°. Adaptable for use with thermometers calibrated for 76 mm immersion. The sidearm of the 125 mL flask is located approximately 137 mm from the bottom of the flask to meet the requirements of ASTM E-1405 and can be used in ASTM tests D-86, D-233 and D-447. Suitable for microchemical applications.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Sidearm O.D. x Length (mm)	Qty/Pk	Qty/Cs
4620-25	25	0	42 x 157	7 x 100	–	1
4620-50	50	0	49 x 163	7 x 100	–	1
4620-125*	125	2	69 x 214	7 x 100	6	24
4620-250	250	3	86 x 250	9 x 130	4	24
4620-500	500	4	102 x 268	9 x 130	–	1
4620-1L	1000	5	130 x 321	11 x 180	–	1

*Heavy duty.

4680 PYREX Brand, Barrett, Distilling

For use in grading benzol, distilled from coal tar by the Koppers process. The side arm is approximately 120 ±3 mm from the bottom of the flask, as required in ASTM E-1405. Can be used in ASTM tests D-850, D-1078 and D-455.

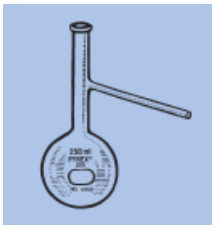
Cat. No.	Capacity (mL)	Stopper Rubber No.	Approx. O.D. x Height (mm)	Sidearm O.D. x Length (mm)	Qty/Pk	Qty/Cs
4680-200	200	3	76 x 179	7 x 100	4	24

Reference: *Journal of Industrial and Engineering Chemistry*, Vol. X, 1918, P. 1006; and Barrett tests E4 and E5.

4720 PYREX® Brand, Church, Distilling

For the distillation of bituminous materials suitable for road treatment. Also used in the *Standard Method of Test of the Distillation of Creosote Oil*, American Wood Preservers Association, method 11e, Barrett method C 9, American Association of State Highway Officials, methods T 52 and T 62.

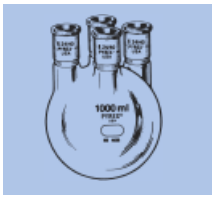
Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Sidearm O.D. x Length (mm)	Qty/Cs
4720-500	500	5	102 x 135	13 x 220	1



4900 PYREX Brand, Saybolt, Distilling

For use according to standard methods in the distillation of gas oils.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Sidearm O.D. x Length (mm)	Qty/Pk	Qty/Cs
4900-250	250	1	86 x 215	6 x 100	6	24



4935 PYREX Brand, Distilling, Four Necks, Vertical Type, Outer ⅋ Joints

The three side necks are placed 90° apart.

Cat. No.	Capacity (mL)	Center Neck ⅋ Joint	Side Neck ⅋ Joint	Approx. O.D. x Height (mm)	Qty/Cs
4935-1L	1000	34/45	24/40	130 x 190	1
4935-2L	2000	45/50	24/40	162 x 235	1
4935-5L	5000	45/50	24/40	221 x 300	1

4950 PYREX Brand, Distilling, Three Necks, Vertical Type, ⅋ 24/40 Joints

The three necks are the same height. Each neck has a ⅋24/40 joint.

Cat. No.	Capacity (mL)	⅋ Joint Size	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4950-500	500	24/40	102 x 160	1	4
4950-1L	1000	24/40	130 x 185	1	4
4950-2L	2000	24/40	162 x 215	1	4
4950-3L	3000	24/40	184 x 240	1	3
4950-5L	5000	24/40	221 x 275	1	3

4960 PYREX Brand, Distilling, Three Necks, Vertical Type, ⅋ Joints

With full length ⅋ joints.

Cat. No.	Capacity (mL)	Center Neck ⅋ Joint	Side Neck ⅋ Joint	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4960-250	250	24/40	24/40	83 x 140	1	4
4960-500	500	34/45	24/40	102 x 165	1	4
4960-1L	1000	34/45	24/40	130 x 190	1	4
4960-2L	2000	45/50	24/40	162 x 228	1	4
4960-3L	3000	45/50	24/40	185 x 250	1	3
4960-5L	5000	45/50	24/40	221 x 300	1	3
4960-12L	12000	55/50	29/42	295 x 385	–	1

4960A PYREX® Brand, Distilling, Three Necks, Vertical Type, ⅀ Joints

With full length joints.

Cat. No.	Capacity (mL)	Center Neck ⅀ Joint	Side Neck ⅀ Joint	Approx. O.D. x Height (mm)	Qty/Cs
4960A-500	500	29/42	24/40	102 x 160	1
4960A-1L	1000	29/42	24/40	130 x 185	1
4960A-2L	2000	29/42	24/40	162 x 217	1

4963A PYREX Brand, Distilling, Micro, Three Necks, Angle Type, ⅀ Joints

Cat. No.	Capacity (mL)	Center Neck ⅀ Joint	Side Neck ⅀ Joint	Approx. O.D. x Height (mm)	Qty/Cs
4963A-25	25	14/20	14/20	43 x 71	1
4963A-50	50	14/20	14/20	49 x 75	1

4965 PYREX Brand, Distilling, Three Necks, Angle Type, ⅀ Joints

Cat. No.	Capacity (mL)	Center Neck ⅀ Joint	Side Neck ⅀ Joint	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
4965-100	100	24/40	19/38	65 x 120	1	4
4965-250*	250	24/40	24/40	83 x 140	1	4
4965-500	500	34/45	24/40	102 x 160	1	4
4965-1L	1000	34/45	24/40	130 x 190	1	4

*The 250 mL flask is also a replacement part for organic chemistry kits Cat. Nos. 6949-6949K.

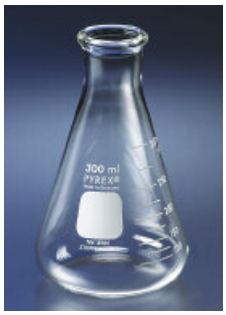
4965A PYREX Brand, Distilling, Three Necks, Angle Type, ⅀ Joints

Cat. No.	Capacity (mL)	⅀ Joint	Approx. O.D. x Height (mm)	Qty/Cs
4965A-500	500	24/40	87 x 156	1
4965A-1L	1000	24/40	130 x 185	1

4965B PYREX Brand, Distilling, Three Necks, Angle Type, ⅀ Joints

Cat. No.	Capacity (mL)	⅀ Joint	Approx. O.D. x Height (mm)	Qty/Cs
4965B-500*	500	19/22	102 x 138	1
4965B-250	250	19/22	83 x 128	1

*This 500 mL flask is also a replacement part for organic chemistry kits Cat. Nos. 6949-6949K.



4980 PYREX Brand, Erlenmeyer, Narrow Mouth, Heavy Duty Rim, Graduated

Approximate graduations are in durable white enamel. An extra large marking space is also provided. Heavy, durable top tooling.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Grad. Range (mL)	Grad. Interval (mL)	Approx. O.D. x Height (mm)	Qty/ Pk	Qty/ Cs
4980-10	10	00	5-10	5	31 x 50	–	12
4980-25	25	0	10-25	5	41 x 65	12	48
4980-50	50	1	20-50	10	51 x 78	12	48
4980-125	125	5	50-125	25	67 x 114	12	48
4980-250	250	6	50-200	25	82 x 132	12	48
4980-300	300	6	100-300	25	89 x 144	12	48
4980-500	500	7	100-500	50	101 x 176	6	36
4980-1L	1000	9	250-1000	50	129 x 216	6	24
4980-1XL	1500	9	400-1500	100	149 x 244	–	1
4980-2L	2000	10	600-1800	200	160 x 268	1	8
4980-4L	4000	10	1000-4000	500	206 x 360	1	4
4980-6L	6000	10	1500-6000	500	241 x 410	1	4
4980-PACK	Assortment Pack					5	1

*A convenience pack containing one each of the most popular sizes of Cat. No. 4980 flask. Designed for the low volume user, a case contains one each of five sizes; 50 mL, 125 mL, 250 mL, 500 mL, and 1L. Packaged in a partitioned carton for safe transit and storage.

4985 PYREX® Brand, Erlenmeyer, Screw Cap, Graduated

These Erlenmeyer flasks with phenolic screw caps are ideal for culturing, mixing and storing media. Impact resistant caps are equipped with cemented-in, inert white rubber liners which are resistant to steam sterilization. Flasks are graduated and include marking space.

Cat. No.	Capacity (mL)	G.P.I. Thread Finish	Grad. Range (mL)	Grad. Interval (mL)	Approx. O.D. x Height (mm)	Qty/ Pk	Qty/ Cs
4985-50	50	24-410	20-50	10	50 x 78	12	24
4985-125	125	24-410	50-125	25	68 x 105	12	24
4985-250	250	38-430M	50-200	25	81 x 135	6	24
4985-500	500	38-430M	100-500	50	102 x 186	6	24
4985-1L	1000	38-430M	250-1000	50	128 x 218	6	12

For cap only, see Cat. No. 9999.

4995 PYREX Brand, Erlenmeyer, Wide-Mouth, Screw Cap, Graduated

Features a convenient single size plug-seal cap. Wide, 29mm neck opening makes it easy to use larger volume serological pipets. Ideal product for all media prep and storage needs. Can be used as vented culture flask when optional membrane cap is used.

Cat. No.	Description	Approx. O.D. x Height (mm)	Qty/Cs
4995-250	Flask	81 x 140	6
4995-500	Flask	102 x 185	6
4995-1L	Flask, 1000 mL	128 x 225	6
4995-2L	Flask, 2000 mL	160 x 268	1
4995-4L	Flask, 4000 mL	206 x 335	1
4995-6L	Flask, 6000 mL	235 x 395	1

For replacement caps, O-Rings or Vented Membrane Cap, see Cat. No. 1395.

5000 PYREX Brand, Erlenmeyer, Narrow Mouth, Ʃ Joint, Graduated

A range of Erlenmeyer flasks with joints. For convenience, these flasks are graduated to show approximate capacity.

Cat. No.	Capacity (mL)	Joint	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
5000-50	50	19/38	48x98	–	1
5000-125	125	24/40	67 x 120	6	12
5000-250	250	24/40	81 x 161	6	12
5000-500*	500	24/40	101 x 198	6	12
5000-1L	1000	24/40	129 x 233	1	12

*Reference ASTM E-123.

5020 PYREX Brand, Erlenmeyer, Narrow Mouth, PYREX Ʃ Stopper, Graduated

For convenience, these flasks are graduated to show approximate capacity. The 25, 50 and 125 mL flasks are satisfactory for use as a weighing bottle.

Cat. No.	Description	Capacity (mL)	Approx. O.D. x Height (mm)	Stopper No.	Qty/Pk	Qty/Cs
5020-25	Complete	25	40 x 92	16	6	12
5020-50	Complete	50	48 x 101	19	–	12
5020-125	Complete	125	68 x 136	22	6	12
5020-250	Complete	250	81 x 171	27	6	12
5020-500	Complete	500	101 x 215	32	1	8
5020-1L	Complete	1000	129 x 241	32	1	6

For stopper only, see Cat. No. 7650.

55020 PYREX® Brand, Low Actinic, Erlenmeyer, Narrow Mouth, PYREX ⅋ Stopper

Low actinic stained glass provides protection for materials sensitive to light. The protective color is an integral part of the flask, which retains the mechanical strength, chemical stability and thermal resistance of PYREX Brand labware.

Cat. No.	Description	Capacity (mL)	⅋ Stopper No.	Qty/Cs
55020-250	Complete	250	27	1

5100 PYREX Brand, Erlenmeyer, Heavy Duty Rim, Wide Mouth, Graduated

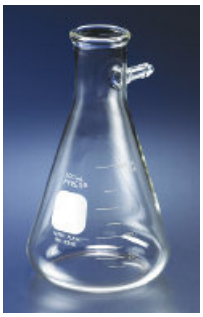
A wide mouth flask especially recommended for use as a titration flask. For convenience, these flasks are graduated to show the approximate capacity and have an extra large marking spot.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Grad. Range (mL)	Grad. Interval (mL)	Qty/Pk	Qty/Cs
5100-125	125	6	50-125	25	12	48
5100-250	250	8	50-200	25	12	48
5100-500	500	10	100-500	50	6	36
5100-1L	1000	11	250-1000	50	6	24
5100-2L	2000	13	400-1800	100	1	8

5320 PYREX Brand, Filtering, Heavy Wall, Graduated

These flasks, without tubulation, are blown in special molds, in shapes designed to give maximum mechanical strength. These flasks are graduated to show their approximate capacity. Marked "Filter Flask" to avoid confusion with similar sizes of Erlenmeyer flasks. All flasks have permanent white enamel graduations and marking spots.

Cat. No.	Capacity (mL)	Grad. Range (mL)	Grad. Interval (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/ Pk	Qty/ Cs
5320-250	250	75-250	25	6	84 x 146	6	18
5320-500	500	150-500	50	7	106 x 184	6	18
5320-1L	1000	300-1000	50	8	137 x 238	6	12
5320-2L	2000	600-1800	200	9	168 x 292	1	12
5320-4L	4000	1500-3500	500	12	198 x 372	1	6

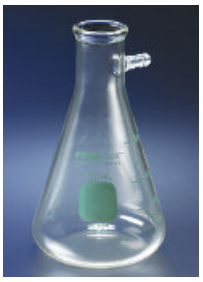


5340 PYREX Brand, Filtering, Heavy Wall, Tubulation, Graduated

These flasks, with tubulation, are blown in special molds, in shapes designed to give maximum mechanical strength. For convenience, the flasks are graduated to show approximate capacity. The neck finish affords an excellent fit for rubber stoppers. Tubulation O.D. on sizes up to 1000 mL is 10mm. Tubulation O.D. for 2000 mL and 4000 mL is 12.5 mm.

Cat. No.	Capacity (mL)	Grad. Range (mL)	Grad. Interval (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
5340-250	250	75-250	25	6	84 x 146	6	18
5340-500	500	150-500	50	7	106 x 184	6	18
5340-1L	1000	300-1000	50	8	137 x 238	6	12
5340-2L	2000	600-1800	200	9	168 x 292	1	12
5340-4L	4000	1500-3500	500	12	198 x 356	1	6

65340 PYREXPLUS® Brand, Filtering, Heavy Wall, Protective Coating,* Tubulation, Graduated

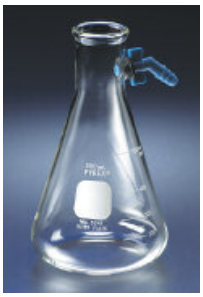


Flask features a protective PVC coating for longer product life and safety. Protective coating helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. For convenience, the flasks are graduated to show approximate capacity. Tubulation O.D. is 10mm on sizes up thru 1000 mL. Tubulation O.D. is 12.5 mm on 2000 and 4000 mL sizes. The tubulation is not coated to allow easy connection of standard size tubing.

Cat. No.	Capacity (mL)	Grad. Range (mL)	Grad. Interval (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
65340-250	250	75-250	25	6	84 x 146	–	6
65340-500	500	150-500	50	7	106 x 184	–	6
65340-1L	1000	300-1000	50	8	137 x 238	–	6
65340-2L	2000	600-1800	200	9	168 x 292	1	4
65340-4L	4000	1500-3500	500	12	198 x 356	1	2

Do not place over direct heat or flame. Do not heat above 121°C moist heat or 110°C dry heat.
*Covered by U.S. Patent #4940613.

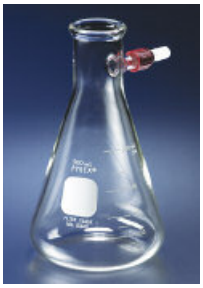
5341 PYREX® Brand, Filtering, Heavy Wall, Replaceable Tubulations



This filtering flask is a standard PYREX Brand heavy wall filtering flask into which is seated a bent, poly tubulation in a grommet. Should the flask be upset, the grommet acts as a shock absorber.All flasks have permanent white enamel graduations and marking spots. The tubulation O.D. is 12.5 mm.

Cat. No.	Description	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/ Pk	Qty/ Cs
5341-250	Complete	250	6	84 x 146	–	1
5341-500	Complete	500	7	106 x 184	–	1
5341-1L	Complete	1000	8	137 x 238	6	12
5341-2L	Complete	2000	9	168 x 292	1	6
5341-4L	Complete	4000	12	198 x 356	1	4
5341-PTO	Poly Tubulation with Grommet	–	–	–	–	6

5342 PYREX Brand, Filtering, Heavy Wall, Graduated, Quick-Release Hose Connector



This filtering flask is a standard PYREX brand heavy wall filtering flask with a quick-release connector designed to accommodate 1/4" ID tubing, not included. For convenience, the flasks are graduated to show approximate capacity.

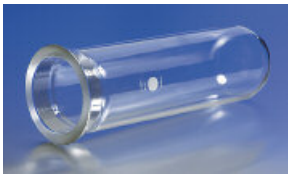
Cat. No.	Capacity (mL)	Grad. Range (mL)	Grad. (mL) Interval	Approx. O.D. x Height (mm)	Stopper No.	Qty/Pk	Qty/Cs
5342-250	250	75-250	25	84 x 146	6	6	18
5342-500	500	150-500	50	106 x 184	7	6	18
5342-1L	1000	300-1000	50	137 x 238	8	6	12
5342-2L	2000	600-1800	200	168 x 292	9	1	6
5342-4L	4000	1500-3500	500	198 x 356	12	1	6

5360 PYREX Brand, Filtering, Micro, Tubulation

These small filtering flasks are recommended for microchemical use. All flasks have permanent white enamel marking spots.

Cat. No.	Capacity (mL)	Tubl. O.D. (mm)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
5360-25	25	8	3	40 x 75	6	18
5360-50	50	8	4	51 x 85	6	18
5360-125	125	10	5	70 x 110	6	18

5370 PYREX® Brand, Flask Body, Reaction, Cylindrical



Flask has an inside diameter of 4 inches (approx. 100 mm) and round bottom. Upper end is tooled to obtain a thickened portion and flat top. Top is finely ground to provide for a leak-resistant fit with cover Cat. No. 5390. Flange O.D. is 135 mm.

Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Cs
5370-500	500	114 x 118	1
5370-1L	1000	114 x 175	1
5370-1XL	1500	114 x 205	1
5370-2L	2000	114 x 285	1
5370-3L	3000	114 x 400	1

5380 PYREX Brand, Flask Body, Reaction, Spherical

Flask has a spherical body and a neck portion that has an inside diameter of 4 inches. Upper end of neck is tooled to obtain a thickened portion and flat top. Top is finely ground to provide for a leak-resistant fit with cover Cat. No. 5390

Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Cs
5380-2L	2000	160 x 230	1
5380-3L	3000	185 x 255	1
5380-5L	5000	220 x 290	1
5380-12L	12000	295 x 365	1
5380-22L	22000	350 x 420	1
5380-50L	50000	460 x 530	1

5390 PYREX Brand, Cover, Reaction Flask, Three Neck, Ŝ Joints

Cover for flask Cat. Nos. 5370 and 5380. Center neck and two side necks are 180° apart. All necks have full length Ŝ outer joint. The inside diameter at bottom cover is 4 inches, and this end is tooled to obtain a thickened outwardly tapered portion with flat bottom. Bottom is finely ground for a leak-resistant fit with a flask.

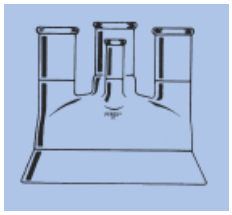
Cat. No.	Center Neck Ŝ Joint	Side Neck Ŝ Joint	Approx. O.D. x Height (mm)	Qty/Cs
5390-2424	24/40	24/40	135 x 115	1
5390-2924	29/42	24/40	135 x 125	1
5390-2929	29/42	29/42	135 x 125	1

5392 PYREX Brand, Cover, Reaction Flask, Four Neck, Ŝ Joints

Cover for flask Cat. Nos. 5370 and 5380. Center neck and three side necks are 120° apart. All four necks have full length Ŝ outer joints. The bottom of cover is similar to Cat. No. 5390 with inside diameter of 4 inches (approx. 100 mm), and finished for strong leak-resistant fit with a flask.

Cat. No.	Center Neck Ŝ Joint	Side Neck Ŝ Joint	Approx. O.D. x Height (mm)	Qty/Cs
5392-2424	24/40	24/40	135 x 125	1
5392-2924	29/42	24/40	135 x 130	1
5392-2929	29/42	29/42	135 x 120	1

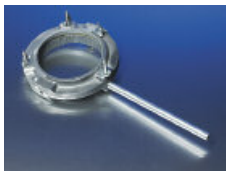
5394 PYREX® Brand, Cover, Reaction Flask, Four Neck, ⅀ Joints



Cover for flask Nos. 5370 and 5380. Center neck and three side necks, all with full length ⅀ outer joint. Two of the side necks are 180° apart, while the third one, with a ⅀ 10/30 joint, is equidistant from the other two. The bottom cover has inside diameter of 4 inches (approx. 100 mm), and has a tooled portion at the end to obtain a thickened outwardly tapered finish with finely ground flat bottom.

Cat. No.	Center Neck ⅀ Joint	Two Side Neck ⅀ Joint	Approx. O.D. x Height (mm)	Qty/Cs
5394-2424	24/40	24/40	135 x 125	1
5394-2924	29/42	24/40	135 x 125	1
5394-2929	29/42	29/42	135 x 125	1

5398 PYREX Brand, Clamp, Reaction Flask



For use with any combination of flask body and cover, Cat. Nos. 5370 and 5380. Clamp is made of aluminum, designed to allow the clamp to be removed without disturbing either cover or body of reaction flask. Lower half has an extension bar for clamping to a suitable supporting stand or lattice framework.

Cat. No.	Qty/Cs
5398-C	1

5400 PYREX Brand, Iodine Determination, Pyrex ⅀ Stopper

PYREX brand iodine determination flasks are blown in specially designed molds, thereby insuring uniformity and proper contour. The stopper projects above the liquid seal trough to facilitate removal.

Cat. No.	Capacity (mL)	⅀ Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
5400-125	125	22	66 x 146	6	12
5400-250	250	22	81 x 184	1	8
5400-500	500	22	101 x 220	–	6

Reference: ASTM D-29 and D-555. See Cat. No. 7640N for stopper only.

5420 PYREX Brand, Kjeldahl, Round Bottom, Long Neck

Of all the common laboratory test methods, the Kjeldahl method for determining nitrogen subjects the boiling flask to the most severe thermal and chemical abuse. These Kjeldahl flasks, specially styled, have tooled finished necks for extra strength and uniform stopper fit. Wall thickness is controlled to offer the optimum balance between thermal shock and chemical resistance. Can be used in ASTM E-258 procedure. Care must be taken to ensure the bottoms of the flasks do not come in contact with the heating elements. Most Kjeldahl equipment manufacturers have ring supports for this purpose.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
5420-100	100	2	55 x 210	6	24
5420-300	300	5	79 x 298	6	24
5420-500	500	6	101 x 324	6	24
5420-800	800	7	117 x 365	6	18

Reference: ASTM E-1377.

5440 PYREX Brand, Kjeldahl, Micro, Round Bottom, Long Neck

Flask, without tooled neck, is suitable for multiple micro digestions.Care must be taken to ensure the bottoms of the flasks do not come in contact with the heating elements. Most Kjeldahl equipment manufacturers have ring supports for this purpose.

Cat. No.	Capacity (mL)	Rubber Stopper No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
5440-30	30	0	40 x 180	6	18

Reference: ASTM E-147.

5580 PYREX® Brand, Volumetric, Class A, Snap-Cap

The strength of these flasks has been increased appreciably through machine-blown bodies to which are sealed heavy-beaded, heavy-tubing necks, tooled for snap-cap fit. The graduation line is sharp and permanent and large white block letters make the inscription easy to read. The 1mL and 2mL sizes are test tube shaped. The 10 mL through 2000 mL sizes are supplied with snap-caps.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Snap-Cap No.	Qty/Pk	Qty/Cs
5580-1*	1	0.01	10 x 55	–	6	12
5580-2*	2	0.015	9 x 85	–	6	12
5580-10	10	0.02	28 x 78	10	–	12
5580-25	25	0.03	40 x 100	25	6	12
5580-50	50	0.05	51 x 130	50	6	12
5580-100	100	0.08	60 x 160	100	6	12
5580-200	200	0.10	74 x 198	200	6	12
5580-250	250	0.12	78 x 225	250	6	12
5580-500	500	0.20	100 x 259	500	6	12
5580-1L	1000	0.30	125 x 310	1000	1	6
5580-2L	2000	0.50	158 x 357	2000	1	4

*No snap-caps for 1mL and 2mL sizes.
For snap-caps only, see Cat. No. 7666.

5600 PYREX Brand, Lifetime Red™, Volumetric, Class A, Snap-Cap, Graduated, Calibrated "To Contain"

The capacity mark is a fine line etched through a narrow red band into clear glass, making a filler unnecessary and giving high legibility, accuracy, and permanence. Snap-caps supplied with all sizes.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Snap-Cap No.	Qty/Pk	Qty/Cs
5600-25	25	0.03	40 x 100	25	6	12
5600-50	50	0.05	51 x 130	50	6	12
5600-100	100	0.08	60 x 160	100	6	12
5600-200	200	0.10	74 x 198	200	6	12
5600-250	250	0.12	78 x 225	250	6	12
5600-500	500	0.20	100 x 259	500	6	12
5600-1L	1000	0.30	125 x 310	1000	1	6
5600-2L	2000	0.50	158 x 357	2000	1	4

See Cat. No. 7666 for snap cap.

5630 PYREX Brand, Volumetric, Class A, Micro, Hexagonal Base, PYREX ⅌ Stopper

Volumetric flasks for microchemical work, sizes 1 through 5 mL, are designed in accordance with the recommendations of the Committee of Microchemical Apparatus, Analytical Division of the A.C.S. To improve the stability of this small flask, a hexagonal base, similar to those on all cylinders, has been added. The graduation line is shart and permanent. The white markings are easy to read.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D x Height (mm)	⅌ Stopper No.	Qty/Pk	Qty/Cs
5630-1	1	0.01	8 x 68	8	–	12
5630-2	2	0.015	12 x 71	8	–	12
5630-5	5	0.02	17 x 80	8	–	12
5630-10	10	0.02	20 x 105	9	–	12
5630-25	25	0.03	29 x 132	9	6	12

For stoppers only, see Cat. No. 7650.
Reference: ASTM E-237.

5631 PYREX® Brand, Volumetric, Class A, Corning Certified and Serialized, Micro, PYREX Stopper

Calibrated to Class A Tolerance and individually serialized and supplied with a Certificate of Identification and Capacity. To improve the stability of this flask, a hexagonal base has been added. The graduation line is sharp and permanent and the white markings are easy to read. Each flask features a PYREX stopper.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D x Height (mm)	⅋ Stopper No.	Qty/Cs
5631-1	1	0.01	8 x 68	8	6
5631-2	2	.015	12 x 71	8	6
5631-5	5	0.02	17 x 80	8	6
5631-10	10	0.02	20 x 105	9	6
5631-25	25	0.03	29 x 132	9	6

For stoppers only, see Cat. No. 7650.

5635 PYREX Brand, Flask, Volumetric, Class A, Wide Mouth, Heavy Duty, PYREX ⅋ Stopper

Designed for microchemical work. The heavy duty, wide mouth facilitates filling and mixing. Easy to read graduation line is sharp and permanent. Supplied with interchangeable standard taper ground glass stoppers.

Cat. No.	Capacity) (mL	Tol. (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Cs
5635-10	10	0.02	48 x 135	13	6
5635-25	25	0.03	40 x 100	13	6
5635-50	50	0.05	51 x 130	13	6
5635-100	100	0.08	66 x 160	16	6
5635-200	200	0.10	72 x 170	19	6
5635-250	250	0.12	87 x 180	19	6

For replacement stopper only, see Cat. No. 7650-13.

55635 PYREX Brand, Low Actinic, Volumetric, Class A, Wide Mouth, Heavy Duty, PYREX Stopper

Low actinic stained glass provides protection for materials sensitive to light. The protective color is an integral part of the flask, which retains the mechanical strength, chemical stability and thermal resistance of the PYREX brand labware. The heavy duty, wide mouth accommodates pipet filling and mixing. Easy to read graduation line is sharp and permanent. Designed for microchemical work and calibrated to Class A Tolerance. Each flask features a PYREX stopper.

Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Cs
55635-25	25	40 x 100	13	6
55635-50	50	51 x 130	13	6
55635-100	100	65 x 160	16	6
55635-250	250	85 x 180	19	6
55635-25FO	25	40 x 100	13	6
55635-50FO	50	51 x 130	13	6

For stoppers only, see Cat. No. 7650.

5640 PYREX® Brand, Volumetric, Class A, PYREX ⅀ Stopper

The strength of these flasks has been increased appreciably through machine-blown bodies to which are sealed heavy-tubing necks tooled for ⅀ glass stoppers. The graduation line is sharp and permanent and large white block letters make the inscription easy to read. The 1 mL and 2 mL sizes are test tube shaped. Sizes 3L thru 6L have pennyhead ⅀ stoppers.

Cat. No.	Description	Capacity (± mL)	Tol. (mL)	Approx. O.D. x Height (mm)	⅀ Stopper No.	Qty/ Pk	Qty/ Cs
5640-1	Complete	1	0.01	9 x 79	8	–	12
5640-2	Complete	2	0.015	9 x 114	8	–	12
5640-5	Complete	5	0.02	26 x 91	8	–	12
5640-10	Complete	10	0.02	28 x 99	9	–	12
5640-25	Complete	25	0.03	40 x 121	9	6	12
5640-50	Complete	50	0.05	51 x 151	9	6	12
5640-100	Complete	100	0.08	60 x 181	13	6	12
5640-200	Complete	200	0.10	74 x 214	13	6	12
5640-250	Complete	250	0.12	78 x 252	16	6	12
5640-500	Complete	500	0.20	100 x 287	19	6	12
5640-1L	Complete	1000	0.30	125 x 342	22	1	6
5640-2L	Complete	2000	0.50	158 x 388	27	1	4
5640-3L	Complete	3000	1.0	180 x 440	32	–	1
5640-4L	Complete	4000	1.0	205 x 480	38	–	1
5640-5L	Complete	5000	1.5	225 x 510	38	–	1
5640-6L	Complete	6000	2.0	230 x 550	38	–	1
5640-10FO	Flask only	10	–	–	–	–	12
5640-25FO	Flask only	25	–	–	–	–	1
5640-50FO	Flask only	50	–	–	–	–	1
5640-100FO	Flask only	100	–	–	–	–	12
5640-200FO	Flask only	200	–	–	–	–	1
5640-250FO	Flask only	250	–	–	–	–	1
5640-500FO	Flask only	500	–	–	–	–	1
5640-1LFO	Flask only	1000	–	–	–	–	1

For stopper only on sizes 1 mL thru 2L, see Cat. No. 7650; for sizes 3L thru 6L, see Cat. No. 7660.

55640 PYREX Brand, Low Actinic, Volumetric, Class A, PYREX ⅀ Stopper

Low actinic stained glass provides protection for materials sensitive to light. The protective color is an integral part of the flask, which retains the mechanical strength, chemical stability and thermal resistance of PYREX Brand labware.

Cat. No.	Capacity (mL)	Tol. ± (mL)	Approx. O.D. x Height (mm)	⅀ Stopper No.	Qty/Pk	Qty/Cs
55640-10	10	0.02	28 x 99	9	–	12
55640-25	25	0.03	40 x 121	9	6	12
55640-50	50	0.05	51 x 151	9	6	12
55640-100	100	0.08	60 x 181	13	6	12
55640-200	200	0.1	74 x 214	13	6	12
55640-200FO	200	0.1	74 x 214	13	6	12
55640-250	250	0.12	78 x 252	16	6	12
55640-250FO	250	0.12	78 x 252	16	6	12
55640-500	500	0.20	100 x 287	19	–	1
55640-1L	1000	0.30	125 x 342	22	–	1
55640-2L	2000	0.15	158 x 388	27	–	1

65640 PYREXPLUS® Brand, Volumetric, Class A, Protective Coating*, PYREX® Stopper

Flask features a protective PVC coating for longer product life and safety. Protective coating helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. The graduation mark is easy to read. Supplied with PYREX stopper.

Cat. No.	Description	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Stopper No.	Qty/Pk	Qty/Cs
65640-100	Complete	100	0.08	60 x 181	13	6	12
65640-200	Complete	200	0.10	74 x 214	13	6	12
65640-250	Complete	250	0.12	78 x 252	16	6	12
65640-500	Complete	500	0.20	100 x 287	19	6	12
65640-1L	Complete	1000	0.30	125 x 342	22	1	4
65640-2L	Complete	2000	0.50	158 x 388	27	1	2

For stopper only, see Cat. No. 7650. Do not place over direct heat or flame. Do not heat above 121°C moist heat or 110°C dry heat.
*Covered by U.S. Patent #4940613.

5641 PYREX® Brand, Volumetric, PYREX Stopper

Economy flasks designed for those that do not require the precision accuracy of our Class A capacity flasks. Capacity tolerances are twice those specified for Class A volumetric ware. The graduation line is sharp and permanent; large white block letters make inscriptions easy to read. Supplied with interchangeable ground glass stoppers.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Stopper No.	Qty/Pk	Qty/Cs
5641-10	10	0.04	28 x 99	9	–	12
5641-25	25	0.06	40 x 121	9	6	12
5641-50	50	0.10	51 x 151	9	6	12
5641-100	100	0.16	60 x 181	13	6	12
5641-200	200	0.20	74 x 214	13	6	12
5641-250	250	0.24	78 x 252	16	6	12
5641-500	500	0.40	100 x 287	19	6	12
5641-1L	1000	0.60	125 x 342	22	1	6
5641-2L	2000	1.0	158 x 388	27	1	4

For stopper only, see Cat. No. 7650.

5642 PYREX Brand, Volumetric, Class A, Polyethylene Stopper

The strength of these flasks has been increased appreciably through machine-blown bodies to which are sealed heavy-beaded, heavy-tubing necks, tooled for polyethylene stopper. The stopper is made with a closed bottom and is of linear high density polyethylene to conform to stopper dimensions. The graduation line is sharp and permanent and large white block letters make the inscription easy to read. The 2 mL size is test tube shaped.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Stopper No.	Qty/Pk	Qty/Cs
5642-5	5	0.02	26 x 91	8	–	1
5642-10	10	0.02	28 x 99	9	–	12
5642-25	25	0.03	40 x 121	9	6	12
5642-50	50	0.05	51 x 151	9	6	12
5642-100	100	0.08	60 x 181	13	6	12
5642-200	200	0.10	74 x 214	13	6	12
5642-250	250	0.12	78 x 252	16	6	12
5642-500	500	0.20	100 x 287	19	6	12
5642-1L	1000	0.30	125 x 342	22	1	6
5642-2L	2000	0.50	158 x 388	27	1	4

For stopper only, see Cat. No. 7624.

5644 PYREX® Brand, Volumetric, Class A, PTFE Stopper

The strength of the flasks have been significantly increased through machine-blown bodies, which are sealed to heavy-tubing necks. The graduation line is sharp and permanent. Large white block letters make the inscription easy to read. Supplied with PTFE color-coded, keyhole stoppers.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Pk	Qty/Cs
5644-2	2	0.015	9 x 114	8	–	12
5644-5	5	0.02	26 x 91	8	–	12
5644-10	10	0.02	28 x 99	9	–	12
5644-25	25	0.03	40 x 121	9	6	12
5644-50	50	0.05	51 x 151	9	6	12
5644-100	100	0.08	59 x 181	13	6	12
5644-200	200	0.10	74 x 219	13	6	12
5644-250	250	0.12	78 x 252	16	6	12
5644-500	500	0.20	100 x 287	19	6	12
5644-1L	1000	0.30	125 x 342	22	1	6
5644-2L	2000	0.50	158 x 388	27	1	4

For stoppers only, see Cat. No. 7630.

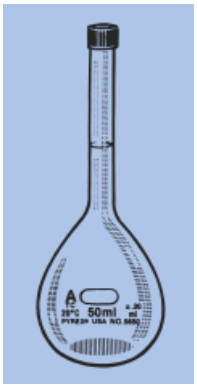
5646 PYREX Brand, Volumetric, VERIFIED Class A, Polyethylene and ⅋ Glass Stoppers

New!

These volumetric flasks exceed the current standard (ASTM E-542) for manufacturing volumetric flasks, because each individual flask is verified to meet the Class A volumetric tolerances in ASTM E-288. Each flask is also labeled with a lot number, enabling you to access a Certificate of Analysis with lot-specific data regarding both measurements and methods, trace your glassware, and track usage. All Flasks are provided with both a polyethylene and ⅋ PYREX glass stopper.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Pk	Qty/Cs
5646-5	5	0.02	26 x 91	8	1	12
5646-10	10	0.02	28 x 99	9	1	12
5646-25	25	0.03	40 x 121	9	2	12
5646-50	50	0.05	51 x 151	9	2	12
5646-100	100	0.08	60 x 181	13	2	12
5646-200	200	0.10	74 x 214	13	2	12
5646-250	250	0.12	78 x 252	16	2	12
5646-500	500	0.20	100 x 287	19	2	12
5646-1L	1000	0.30	125 x 342	22	6	6
5646-2L	2000	0.50	158 x 388	27	4	4

5650 PYREX Brand, Volumetric, Class A, Screw Cap



These PYREX volumetric flasks conform to Class A capacity tolerances prescribed by ASTM. To facilitate transfer of crystals, salts, and powders, the open end has been expanded on the 25 mL and 50 mL sizes. The standard 18-410 G.P.I. thread screw caps have a durable cone-shaped polyethylene liner.

Cat. No.	Description	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
5650-25	Complete	25	0.03	40 x 100	18-410	2	12
5650-50	Complete	50	0.05	50 x 130	18-410	2	12
5650-100	Complete	100	0.08	60 x 160	18-410	2	12
5650-18CO	Cap only	–	–	–	18-410	1	12

5655 PYREX® EZ Access™ Volumetric Screw Cap Flasks - 5655 Series

These heavy walled volumetric flasks are designed for extra durability and ease of use. The wide funnel-like screw top plus the wide neck design allows for easy filling and mixing of various materials into solution. This extra wide neck also allows access to larger capacity pipets. For added convenience, one size of the GL-32 chemical resistant, high temperature screw cap fits all flasks. This threaded cap with PTFE liner provides for a secure closure for leak proof storage of solutions. An additional extra large volume size is permanently screened onto the flask body for easy volume identification.

These flasks are calibrated "to contain" and designed to meet Class A, ASTM tolerances for volumetrics. They are Lot Traceable* with certificates of compliance available in print: click on left navigational bar - contact us, then click on certificate of compliance.

Accessories include replacement GL-32 caps and GL-32HTSC caps for use with Septa.

*Lot traceable information includes the date that the flask was fabricated, decorated, calibrated, and packed.
Note: Other available caps are Cat. No.s 1395-32HTC, 1395-32HTSC, 1395-32SS and 1395-32TS.

Cat. No.	Description	Capacity (mL)	Tol. (± mL)	Approx. Thread Size	O.D. x Height (mm)	Qty/ Cs
5655-50	Class A, Heavy Duty, Screw Cap, Funnel Top	50	0.05	GL-32	48 x 135	1
5655-100	Class A, Heavy Duty, Screw Cap, Funnel Top	100	0.08	GL-32	64 x 180	1
5655-200	Class A, Heavy Duty, Screw Cap, Funnel Top	200	0.10	GL-32	76 x 225	1
5655-250	Class A, Heavy Duty, Screw Cap, Funnel Top	250	0.12	GL-32	86 x 225	1
5655-500	Class A, Heavy Duty, Screw Cap, Funnel Top	500	0.20	GL-32	102 x 260	1
5655-1L	Class A, Heavy Duty, Screw Cap, Funnel Top	1000	0.30	GL-32	132 x 315	1

5660 PYREX Brand, Lifetime Red™, Volumetric, Class A, PYREX ⅋ Stopper

The capacity mark is a fine line etched through a narrow red band into clear glass, making a filler unnecessary and giving high legibility, accuracy and permanence. With ⅋ stopper. Calibrated "to contain."

Cat. No.	Description	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Pk	Qty/Cs
5660-25	Complete	25	0.03	40 x 122	9	6	12
5660-50	Complete	50	0.05	51 x 152	9	6	12
5660-100	Complete	100	0.08	60 x 182	13	6	12
5660-200	Complete	200	0.10	74 x 214	13	6	12
5660-250	Complete	250	0.12	78 x 253	16	6	12
5660-500	Complete	500	0.20	100 x 289	19	6	12
5660-1L	Complete	1000	0.30	125 x 344	22	1	6
5660-2L	Complete	2000	0.50	158 x 309	27	1	4

For stopper only, see Cat. No. 7650.

5671 PYREX Brand, Volumetric, Class A, TC/TD, Square, PTFE Stopper

Like the 5670 flask but Calibrated "To Contain" and "To Deliver." The graduation lines are sharp and permanent with large white block letters make the inscription easy to read. Flask is supplied with a PTFE stopper.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Stopper No.	Qty/Cs
5671-900	900	0.30	86 x 330	22	1

For stopper only, see Cat. No. 7630.

5680 PYREX® Brand, Volumetric, Class A, Corning Certified and Serialized, PYREX ⅋ Stopper

Calibrated to Class A tolerances in accordance with ASTM E-542 and E-288. Each flask is individually serialized and supplied with a Certificate of Identification and Capacity, traceable to NIST standards. The graduation line is sharp and permanent and large white block letters make the inscription easy to read. Supplied with a ⅋ stopper.

Cat. No.	Description	Capacity (mL)	Tolerance (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Cs
5680-10	Complete	10	0.02	28 x 99	9	1
5680-25	Complete	25	0.03	40 x 122	9	1
5680-50	Complete	50	0.05	51 x 152	9	1
5680-100	Complete	100	0.08	60 x 182	13	1
5680-200	Complete	200	0.10	74 x 214	13	1
5680-250	Complete	250	0.12	78 x 253	16	1
5680-500	Complete	500	0.20	100 x 288	19	1
5680-1L	Complete	1000	0.30	125 x 344	22	1
5680-2L	Complete	2000	0.50	158 x 390	27	1

For stopper only, see Cat. No. 7650.

55680 PYREX Brand, Low Actinic, Volumetric, Class A, Corning Certified and Serialized, PYREX ⅋ Stopper

Calibrated to Class A tolerances in accordance with ASTM E-542 and E-288. Each flask is individually serialized and supplied with a Certificate of Identification and Capacity, traceable to NIST standards. The graduation line is sharp and permanent and large white block letters make the inscription easy to read. Supplied with a ⅋ stopper. Low actinic stained glass provides protection for materials sensitive to light. The protective color is an integral part of the flask, which retains the mechanical strength, chemical stability, and the thermal resistance of PYREX brand labware.

Cat. No.	Description	Capacity (mL)	Tolerance (± mL)	Approx. O.D. x Height (mm)	⅋ Stopper No.	Qty/Cs
55680-10	Complete	10	0.02	28 x 99	9	1
55680-25	Complete	25	0.03	40 x 122	9	1
55680-50	Complete	50	0.05	51 x 152	9	1
55680-100	Complete	100	0.08	60 x 182	13	1
55680-200	Complete	200	0.10	74 x 214	13	1
55680-250	Complete	250	0.12	78 x 253	16	1
55680-500	Complete	500	0.20	100 x 288	19	1
55680-1L	Complete	1000	0.30	125 x 344	22	1
55680-2L	Complete	2000	0.50	158 x 390	27	1

5780 PYREX Brand, Kohlrausch, Volumetric, Class A

With an enlarged neck, 200-mL size conforms to ASTM D-1665 requirements.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Cs
5780-100	100	0.08	59 x 160	1
5780-200	200	0.10	74 x 200	1

5820 PYREX® Brand, Class A, Mixing Volumetric Flask

The upper bulb, located between the stopper and the capacity graduation is approximately one-tenth the flask rated capacity. The 2L size upper bulb is only one-twentieth capacity. The additional bulb assists in the mixing of liquids or powders when shaken.

Cat. No.	Capacity (mL)	Tol. ± (mL)	Approx. O.D. x Height (mm)	Stopper No.	Qty/Pk	Qty/Cs
5820-50	50	0.05	48 x 155	9	–	1
5820-100	100	0.08	60 x 185	13	6	12
5820-250	250	0.12	78 x 256	16	–	1
5820-500	500	0.20	100 x 322	19	–	1
5820-1L	1000	0.30	125 x 323	22	1	6
5820-2L	2000	0.50	158 x 397	27	–	1

For stopper only, see Cat. No. 7650.

5840 PYREX Brand, Volumetric, Phosphoric Acid, Wide Neck

For use in determining phosphoric acid in mixed fertilizer. Of heavy construction throughout and with a wide neck.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
5840-200	200	0.18	74 x 152	6	12
5840-250	250	0.18	78 x 170	6	12

5860 PYREX Brand, Volumetric, Class A, Viscosimeter

Of rugged mold blown construction, the flask is calibrated in accordance with ASTM specifications. *U.S. Bureau of Mines Technical Paper 323B, No. 30.41; A.A.S.H.O. No. T 72; and Gas Chemists Handbook, third edition, page 538. Reference: ASTM D-88 and E-102.*

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Height (mm)	Qty/Cs
5860-60	60	0.05	53 x 91	12

FUNNELS

6060 PYREX Brand, Buchner, Perforated Plate

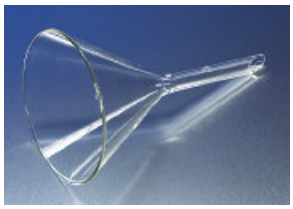
These funnels are suitable for vacuum filtration; however, the translucent plate should not be subjected to a pressure differential in excess of 1 atmosphere. The clear glass bodies afford visual examination during use and cleaning. The size number indicates filter paper diameters in millimeters.

Cat. No.	Approx. Size (mm)	Approx. Height Above Plate (mm)	Approx. Total Height (mm)	Stem O.D. x Height (mm)	Qty/Pk	Qty/Cs
6060-42X	42.5	50	150	10 x 75	1	6
6060-55	55.0	50	154	15 x 75	1	6
6060-90	90.0	90	240	20 x 100	–	1

36060 PYREX® Brand, Buchner, with Fritted Disc

These funnels are especially useful where filter paper would be attacked by the material being filtered. The disc should not be subjected to pressure differential in excess of 1 atmosphere. The top edge is beaded.

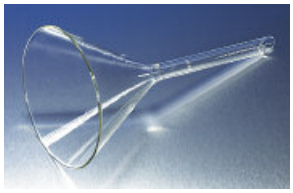
Cat. No.	Capacity (mL) and Porosity	Diam. of Disc (mm)	Approx. Height Above Disc (mm)	Approx. Stem Length x O.D. mm	Approx. Total Height (mm)	Qty/Pk	Qty/Cs
36060-2C	2C	10	30	31 x 7	70	1	9
36060-2F	2F	10	30	31 x 7	70	–	1
36060-2M	2M	10	30	31 x 7	70	1	9
36060-15C	15C	20	47	75 x 8	136	–	6
36060-15F	15F	20	47	75 x 8	136	3	6
36060-15M	15M	20	47	75 x 8	136	–	6
36060-30C	30C	30	47	75 x 8	139	–	6
36060-30F	30F	30	47	75 x 8	139	–	6
36060-30M	30M	30	47	75 x 8	139	–	6
36060-60C	60C	40	58	75 x 10	160	–	6
36060-60F	60F	40	58	75 x 10	160	–	6
36060-60M	60M	40	58	75 x 10	160	–	6
36060-150C	150C	60	50	75 x 15	154	–	4
36060-150F	150F	60	50	75 x 15	154	–	4
36060-150M	150M	60	50	75 x 15	154	–	4
36060-350C	350C	80	75	75 x 20	180	–	3
36060-350F	350F	80	75	75 x 20	180	–	3
36060-350M	350M	80	75	75 x 20	180	–	3
36060-600C	600C	90	90	100 x 20	229	–	3
36060-600F	600F	90	90	100 x 20	229	–	1
36060-600M	600M	90	90	100 x 20	229	–	3
36060-2LC	2000C	127	165	110 x 25	330	–	2
36060-2LF	2000F	127	165	110 x 25	330	–	1
36060-2LM	2000M	127	165	110 x 25	330	–	2
36060-3LC	3000C	152	175	110 x 25	355	–	1
36060-3LF	3000F	152	175	110 x 25	355	–	1
36060-3LM	3000M	152	175	110 x 25	355	–	1



6100 PYREX Brand, Plain 60° Angle, Long Stem, Large Size

Stems are approximately 15 mm O.D. by 150 mm (6") long.

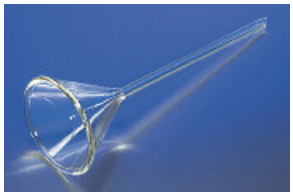
Cat. No.	Approx. Top Inside Dia. (mm)	Approx. Length (mm)	Qty/Pk	Qty/Cs
6100-5	122	250	6	12
6100-6	147	272	6	12



6120 PYREX Brand, Plain 60° Angle, Short Stem, Large Size

Stems are approximately 15 mm O.D. by 100 mm (4") long.

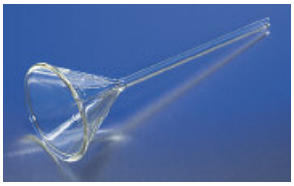
Cat. No.	Approx. Top Inside Diam. (mm)	Approx. Length (mm)	Qty/Pk	Qty/Cs
6120-5	122	199	6	12
6120-6	147	228	6	12



6140 PYREX® Brand, Plain 60° Angle, Long Stem

These funnels have a beaded edge for strength. They are fabricated from blanks formed to a 60° angle, which permits accurate fitting of the filter paper, thus reducing filtering time. The stems are made of heavy wall tubing approximately 150 mm (6") long.

Cat. No.	Approx. Top Inside Diam. (mm)	Approx. Stem O.D. (mm)	Approx. Overall Length (mm)	Qty/Cs
6140-50	50	8	193	12
6140-65	65	8	206	12
6140-75	75	8	214	12
6140-100	100	9	236	6



6160 PYREX Brand, Fluted, 60° Angle, Long Stem

Have a strong beaded edge. These funnels are fabricated from blanks formed to a 60° angle. In addition, they have depressed inside flutings which further decrease filtering time.

Cat. No.	Approx. Top Inside Diam. (mm)	Approx. Stem Length x O.D. (mm)	Approx. Overall Length (mm)	Qty/Pk	Qty/Cs
6160-65	65	150 x 8	206	6	12
6160-75	75	150 x 8	214	–	12

6180 PYREX Brand, Fluted, 60° Angle, Short Stem

Supplied with short stems. Depressed inside flutings further decreases filtering time.

Cat. No.	Approx. Top Inside Diam. (mm)	Approx. Stem Length x O.D. (mm)	Approx. Overall Length (mm)	Qty/Pk	Qty/Cs
6180-50	50	65 x 8	108	12	48
6180-65	65	65 x 8	121	12	48
6180-75	75	75 x 8	139	12	48
6180-100	100	100 x 9	190	6	24

36210 PYREX Brand, Hirsch Type, Fritted Disc

This type is very useful in preparation work, or in making separations where it is necessary to wash the precipitate and redissolve with chemicals which would attack filter paper. The angle of the funnel body facilitates the removal of precipitates.

Cat. No.	Approx. Top Dia. (mm)	Porosity	Approx. Dia of Disc (mm)	Approx. Stem O.D. x Length (mm)	Approx. Length (mm)	Qty/Cs
36210-50C	50C	50C	20	8 x 75	118	1
36210-50M	50M	50M	20	8 x 75	118	1
36210-50F	50F	50F	20	8 x 75	118	1
36210-75C	75C	75C	30	8 x 70	139	1
36210-75M	75M	75M	30	8 x 70	139	1
36210-75F	75F	75F	30	8 x 70	139	1

6220 PYREX Brand, Plain Filling, Powder

With a short stem. For use in transferring powders or filling bottles.

Cat. No.	Approx. I.D. (mm)	Approx. Stem Length x O.D. (mm)	Total Length (mm)	Qty/Pk	Qty/Cs
6220-65	65	25 x 15	83	12	24
6220-75	75	30 x 17	94	12	24
6220-100	100	30 x 20	120	6	24
6220-125	125	35 x 25	132	6	12
6220-150	150	35 x 30	157	6	12

6240 PYREX® Brand, Plain Stemless

Of molded construction with bottom ground flat; for use in the sugar industries. All have 6 mm opening.

Cat. No.	Approx. I.D. (mm)	Approx. Length (mm)	Qty/Pk	Qty/Cs
6240-75	75	60	12	48
6240-100	100	82	–	1

6302 PYREX Brand, Squibb, Separatory, PYREX Stopper, Rotaflo® Stopcock

Features the Rotaflo stopcock and the strong, PYREX hollow stopper. A poly stopper is also included for your convenience. Stem O.D. is 10 mm.

Cat. No.	Size (mL)	Body Diam. (mm)	Total Length (mm)	⧩ Stopper No.	Rotaflo Plug	Qty/Cs
6302-125	125	60	301	22	GP-3	1
6302-250	250	77	338	22	GP-3	1
6302-500	500	98	385	27	GP-6	1
6302-1L	1000	119	415	27	GP-6	1
6302-2L	2000	152	492	38	GP-6	1

For glass stopper only, see Cat. No. 7650. For poly stopper only, see Cat. No. 7624.

6305 PYREX Brand Funnel, Separatory, Squibb, PTFE Valve and Threaded Top

Improved Squibb type separatory funnel provides an unbreakable, all PTFE, valve and drip tip and has a screw thread closure at the top. Supplied complete with PTFE valve assembly and screw cap with PTFE faced silicone liner.

Cat. No.	Description (mL)	Capacity (mL)	Cap Size (mm)	Value Size (mm)	Qty/Cs
6305-60	Complete	60	32	2	1
6305-250	Complete	250	45	4	1
6305-500	Complete	500	45	4	1
6305-1L	Complete	1000	45	4	1
6305-2L	Complete	2000	45	6	1
6305-4L	Complete	4000	45	8	1
6305-60FO	Funnel Only	60	–	–	1
6305-500FO	Funnel Only	500	–	–	1
6305-2LFO	Funnel Only	2000	–	–	1
6305-6LFO	Funnel Only	6000	–	–	1
6305-6VO	Valve Bottom PTFE 6 mm	–	–	–	1
6305-8VO	Valve Bottom PTFE 8 mm	–	–	–	1

6340 PYREX Brand, Separatory, Globe Shape, PYREX ⧩ Stopper, ⧩ Stopcock

These funnels are made from specially molded blanks which are tapered toward the stopcock to facilitate the separation of liquids. Their sturdy design makes them excellent for rack work.

Cat. No.	Capacity (mL)	⧩ Stopper No.	⧩ Stopcock Plug Size	Approx. O.D. x Length of Stem Below Stopcock (mm)	Approx. Total Length (mm)	Qty/Cs
6340-125	125	22	2	10 x 175	328	1
6340-250	250	22	2	10 x 175	357	1
6340-500	500	27	4	10 x 175	381	1
6340-1L	1000	27	4	10 x 170	414	1
6340-4L	4000	38	8	14 x 130	521	1

For stopper only, see Cat. No. 7650.

6383 PYREX® Brand, Separatory, Cylindrical, PYREX ⅋ Stopper, ⅋ Teflon® Stopcock, Graduated from Teflon Stopcock

This funnel is graduated to show approximate capacity, has a micro-finish Teflon stopcock and the strong, lightweight PYREX stopper.

Cat. No.	Capacity (mL)	Grad. Interval (mL)	⅋ Stopper No.	⅋ Stopcock Plug Size	Approx. O.D. x Length of Stem Below Stopcock (mm)	Approx. Total Length (mm)	Qty/ Pk	Qty/ Cs
6383-125	125	1	22	2	10 x 65	315	1	4
6383-250	250	2	22	2	10 x 65	340	1	4
6383-500	500	5	27	4	10 x 65	390	1	4
6383-1L	1000	10	27	4	10 x 65	493	1	2

For stopper only, see Cat. No. 7650.

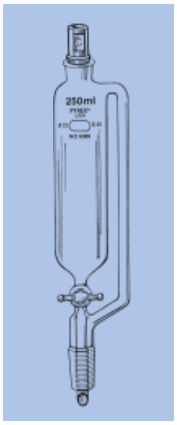
6383A PYREX Brand, Separatory, Cylindrical, ⅋ Joints, Graduated from ⅋ Teflon Stopcock

This funnel is graduated to show the approximate capacity.

Cat. No.	Description	Capacity (mL)	Grad. Interval (mL)	⅋ Stopcock Plug Size	⅋ Joint Size	Approx. Length (mm)	Qty/ Cs
6383A-100*	Complete	100	5	4	24/40	294	1

*This funnel is also a replacement part for organic chemistry kits Cat. Nos. 6949-6949K.

6389 PYREX Brand, Addition, Pressure Equalizing, PYREX ⅋ Stopper, ⅋ Teflon Stopcock, ⅋ Joint



For addition of material to a reactive mixture in a closed system where air must be excluded. The dropping tube below the stopcock permits delivery of solutions by drops. The lower end of the dropping tube extends 15 mm below the lower end of the inner ⅋ joint. Supplied with Teflon stopcock designed to reduce freezing problems and eliminate contaminating greases.

Cat. No.	Capacity (mL)	⅋ Stopper No.	⅋ Stopcock Plug Size	⅋ Joint Size	Approx. Length with Stopper	Tube O.D. (mm)	Qty/ Pk	Qty/ Cs
6389-125	125	22	2	24/40	345	8	1	4
6389-250	250	22	2	24/40	370	10	1	4
6389-500	500	27	4	24/40	420	10	1	2

For stopper only, see Cat. No. 7650.

6400 PYREX Brand, Squibb, Separatory, Pear-Shaped, PYREX ⅋ Stopper, ⅋ Stopcock

Cat. No.	Capacity (mL)	⅋ Stopper No.	⅋ Stopcock Plug Size	Body O.D. (mm)	Approx. O.D. x Length of Stem Below Stopcock	Approx. Total Length (mm)	Qty/Pk	Qty/Cs
6400-30	30	9	2	40	10 x 65	216	–	1
6400-60	60	16	2	55	10 x 65	231	1	6
6400-125	125	22	2	60	10 x 65	279	1	6
6400-250	250	22	2	77	10 x 65	311	1	4
6400-500	500	27	4	98	10 x 65	354	1	4
6400-1L	1000	27	4	119	10 x 65	392	–	1
6400-2L	2000	38	6	152	12 x 65	496	–	1
6400-4L	4000	38	8	206	14 x 65	629	–	1
6400-6L	6000	38	10	225	16 x 60	630	–	1

For stopper only, see Cat. No. 7650.
For returning clip only, see Cat. No. 7280.

6402 PYREX® Brand, Squibb, Separatory, Pear-Shaped, PYREX ⅋ Stopper, ⅋ Teflon® Stopcock

The Teflon plug fits into the micro-finish barrel. The plug also reduces freezing problems and grease contamination.

Cat. No.	Description	Capacity (mL)	⅋ Stopper No.	⅋ Stopcock Plug Size	Approx. O.D. x Length of Stem Below Stopcock (mm)	Approx. Total Length (mm)	Qty/ Pk	Qty/ Cs
6402-60	Complete	60	16	2	10 x 65	225	1	4
6402-125	Complete	125	22	2	10 x 65	280	1	4
6402-250	Complete	250	22	4	10 x 65	311	1	4
6402-500	Complete	500	27	4	10 x 65	355	1	4
6402-1L	Complete	1000	27	4	10 x 65	392	–	1
6402-2L	Complete	2000	38	6	12 x 65	496	–	1
6402-4L	Complete	4000	38	8	14 x 90	–	–	1
6402-6L	Complete	6000	38	10	16 x 90	–	–	1
6402-60FO	Funnel Only	60	–	–	–	–	–	1
6402-125FO	Funnel Only	125	–	–	–	–	–	1
6402-250FO	Funnel Only	250	–	–	–	–	–	1
6402-500FO	Funnel Only	500	–	–	–	–	–	1
6402-1LFO	Funnel Only	1000	–	–	–	–	–	1
6402-2LFO	Funnel Only	2000	–	–	–	–	–	1

For stopper only, see Cat. No. 7650.

66402 PYREXPLUS® Brand, Squibb, Separatory, Pear-Shaped, Protective Coating,* PYREX ⅋ Stopper, ⅋ Teflon Stopcock

Features a PVC coating for longer product life and safety. Protective coating helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. It features a Teflon stopcock which reduces freezing problems and grease contamination.*

Cat. No.	Description	Capacity (mL)	⅋ Stopper No.	⅋ Stopcock Plug Size	Approx O.D. x Length of Stem Below Stopcock (mm)	Approx. Total Length (mm)	Qty/ Pk	Qty/ Cs
66402-125	Complete	125	22	2	10 x 65	280	1	4
66402-250	Complete	250	22	4	10 x 65	311	1	4
66402-500	Complete	500	27	4	10 x 65	355	1	4
66402-1L	Complete	1000	27	4	10 x 65	392	–	1
66402-2L	Complete	2000	38	6	12 x 65	496	–	1

For stopper only, see Cat. No. 7650. Do not place over direct heat or flame. Do not heat above 121°C moist heat or 110°C dry heat. Covered by U.S. Patent #4940613.

6404 PYREX Brand, Squibb, Separatory, Pear-Shaped, Polyethylene Stopper, ⅋ Teflon® Stopcock

The stopper is made with a closed bottom and is of linear high density polyethylene to conform to ⅋ stopper dimensions.

Cat. No.	Description	Capacity (mL)	⅋ Stopper No.	⅋ Stopcock Plug Size	Approx O.D. x Length of Stem Below Stopcock (mm)	Approx. Total Length (mm)	Qty/ Pk	Qty/ Cs
6404-60	Complete	60	16	2	10 x 65	244	1	4
6404-125	Complete	125	22	2	10 x 65	289	1	4
6404-250	Complete	250	22	4	10 x 65	311	1	4
6404-500	Complete	500	27	4	10 x 65	354	1	4
6404-1L	Complete	1000	27	4	10 x 65	392	–	1
6404-2L	Complete	2000	38	6	12 x 65	486	–	1

For stopper only, see Cat. No. 7624.

6406 PYREX® Brand, Squibb, Separatory, Economy, with Replaceable Teflon Stopcock, Tip, and High Density Polyethylene Stopper

An economical separatory funnel designed to reduce replacement costs by providing replaceable components. These sturdy, durable funnels are designed for long life and maximum safety. The replaceable Teflon stopcock assembly features a simple screw thread locking nut and collar which ensure that the stopcock cannot fall out in use. The tip is also replaceable. Its ground end provides a better grip and helps prevent the tip from falling out. The funnel comes complete with a standard taper high density polyethylene stopper. 7 mm O.D. stem.

Cat. No.	Description	Capacity (mL)	Stopper No.	Stopcock Plug Size	Approx. Total Length (mm) (Exclusive of Stopper)	Qty/ Pk	Qty/ Cs
6406-60	Complete	60	16	4	255	1	4
6406-125	Complete	125	22	4	293	1	4
6406-250	Complete	250	22	4	303	1	4
6406-500	Complete	500	27	4	319	1	4
6406-1L	Complete	1000	27	4	395	–	1
6406-2L	Complete	2000	38	4	492	–	1
6406-2LFO	Complete	2000	38	–	–	–	1
6406-60FO	Funnel Only	60	–	–	–	1	4
6406-125FO	Funnel Only	125	–	–	–	1	4
6406-250FO	Funnel Only	250	–	–	–	1	4
6406-500FO	Funnel Only	500	–	–	–	1	4
6406-1LFO	Funnel Only	1000	–	–	–	–	1
2116-LSO	Locking Stopcock Only	–	–	–	–	–	1
6406-GTO	Tip Only	–	–	–	–	12	36

6410 PYREX Brand, Squibb, Separatory, Pear-Shaped, PYREX Stopper, Stopcock, Joint

Separatory funnel drip-tip and ground joint. Convenient as an addition funnel.

Cat. No.	Capacity (mL)	Stopper No.	Stopcock Plug Size	Joint Size	Approx. Length (mm)	Qty/Cs
6410-125	125	22	2	24/40	289	1
6410-250	250	22	2	24/40	311	1
6410-500	500	27	4	24/40	315	1

For stopper only, see Cat. No. 7650.
For stopcock plug only, see Cat. No. 7680.
For retaining clip only, see Cat. No. 7280.

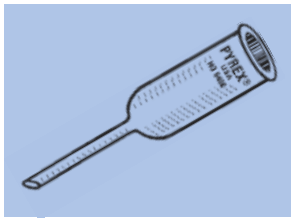
6412A PYREX Brand, Squibb, Separatory, Teflon® Stopcock

Cat. No.	Description	Capacity (mL)	Stopcock Plug Size	Joint Size Inner/Outer	Approx. Height (mm)	Qty/ Cs
6412A-125*	Complete	125	2	14/20	237	1

*This funnel is also a replacement for organic chemistry kits Cat. Nos. 6949-6949K.

6413 PYREX Brand, Squibb, Separatory, Teflon Stopcock

Cat. No.	Description	Capacity (mL)	Stopcock Plug Size	Joint Size Inner/Outer	Approx. Height (mm)	Qty/ Pk	Qty/ Cs
6413-125	Complete	125	2	19/22	238	1	4



9480 PYREX® Brand, Filter Tube Funnel

The constricted lower end is 8 mm O.D. by 75 mm. long on all sizes. For use with PYREX brand crucibles with fritted discs listed under Cat. Nos. 32940 and 32960. Also for use with Gooch crucibles or directly with porcelain plates.

Cat. No.	Approx. I.D. x Length (mm)	Qty/Cs
9480-24	24 x 150	1
9480-27	27 x 150	1
9480-32	32 x 160	1
9480-36	36 x 160	1
9480-42	44 x 160	1

JOINTS

6710 PYREX Brand, Full Length, Sealed Tube, Inner Part Only, ⅋ Interchangeable

Cat. No.	⅋ Joint Size	Approx. Stem O.D. x Length (mm)	Approx. Stem O.D. x Length (mm)	Qty/Pk	Qty/Cs
6710-19	19/38	17 x 150	10 x 115	–	1
6710-24	24/40	22 x 170	12 x 115	1	12

JARS

6885 PYREX Brand, Bell, with Knob

PYREX brand bell jars are made from specially selected mold-blown blanks. The bottom flange has a finely ground finish to assure tight sealing with ground glass plates.Rated 1-Atmosphere Vacuum. Do not use with heat or pressure applications.

Cat. No.	Approx. O.D. x Height (mm)	Approx. I.D. (mm)	Qty/Pk	Qty/Cs
6885-140	140 x 265	130	1	2
6885-165	165 x 315	156	1	2
6885-222	222 x 425	213	–	2

6886 PYREX Brand, Bell

These specially blown, sturdy, round bottom jars have a fine ground finish at the open end. The jar is supplied without a rim flange. The flat, ground, bearing surface has a contact area equal to the wall thickness at the open end of the jar. Do not use with heat, pressure or vacuum applications.

Cat. No.	Approx. O.D. x Length (mm)	Min. I.D. (mm)	Approx. Capacity (Liters)	Approx. O.D. x Length (Inches)	Qty/Cs
6886-12L	318 x 305	292	12.3	12 ½ x 12	1
6886-22L	318 x 457	292	22.7	12 ½ x 18	1
6886-49L	457 x 457	429	49.2	18 x 18	1
6886-66L	390 x 762	362	66.2	15 ⅜ x 30	1
6886-87L	457 x 762	429	87.0	18 x 30	1

Not intended for vacuum applications.

6902 PYREX Brand, Cloud and Pour Point, Graduated

Single line encircles the jar at a point approximately 51 mm above the bottom to assist in measuring the sample.Reference: ASTM D-97, D-1500, D-2500.

Cat. No.	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
6902	35 x 121	12	36

6941 PYREX® Brand, Animal

Recommended for use as animal jars or for other purposes where resistance to hot air and steam sterilization is of importance. These jars are blown with walls approximately 4.5 mm (3/16") thick. The open ends are finished with a fire-polished bead to increase mechanical strength. Jars listed under Cat. No. 6942 can also be used as animal jars. Do not use with heat, pressure or vacuum applications.

Cat. No.	Approx. O.D. x Height (mm)	Approx. O.D. x Height (Inches)	Approx. Capacity (Liters)	Qty/Cs
6941-3L	152 x 203	6 x 8	2.8	1
6941-5L	210 x 203	8 1/4 x 8	4.7	6

Not intended for vacuum applications.

6942 PYREX Brand, Cylindrical, Plain

These jars are mold-blown with substantial walls for mechanical strength. The open end of the jars is ground flat. These jars can also be used as animal jars. Do not use with heat, pressure, or vacuum applications.

Cat. No.	Approx. O.D. x Height (mm)	Approx. O.D. x Height (Inches)	Capacity (Liters)	Qty/Pk	Qty/Cs
6942-7L	222 x 254	8 3/4 x 10	7.5	1	4
6942-9L	257 x 254	10	9.5	–	1
6942-17L	305 x 305	12 x 12	17.0	–	1
6942-27L	305 x 457	12 x 18	26.5	–	1
6942-32L	406 x 305	16 x 12	32.0	–	1

6943 PYREX Brand, Cylindrical, Handles

These jars are made with recessed finger grips for convenience in handling. They are identical in size and shape to corresponding sizes of Cat. No. 6942 jars. Open ends are finely ground. Do not use with heat, pressure or vacuum applications.

Cat. No.	Approx. O.D. x Height (mm)	Approx. O.D. x Height (Inches)	Capacity (Liters)	Qty/Cs
6943-17L	305 x 305	12 x 12	17.0	1
6943-27L	305 x 457	12 x 18	26.5	1
6943-36L	305 x 610	12 x 24	36.0	1

6944 PYREX Brand, Rectangular, Chromatography

Ground to the close tolerances needed for tight cover fit. Jar edges are ground flat within 0.25 mm. Covers are not supplied. Do not use with heat, pressure or vacuum applications.

Cat. No.	Approx. L x W x D (mm)	Approx. L x W x D (Inches)	Capacity (Liters)	Qty/Cs
6944-4L	137 x 162 x 267	5 3/8 x 6 3/8 x 10 1/2	3.8	6
6944-11L	181 x 238 x 324	7 1/8 x 9 3/8 x 12 3/4	11.4	1
6944-23L	308 x 308 x 305	12 1/8 x 12 1/8 x 12	22.7	1
6944-45L	311 x 311 x 610	12 1/4 x 12 1/4 x 24	45.4	1

6945 PYREX® Brand, Cylindrical, Chromatography

A general-purpose jar with tops ground to close tolerances to insure a tight cover fit. The 152 mm jar edge is flat within 0.1 mm; all others are flat within 0.25 mm. Covers are not supplied. Do not use with heat, pressure, or vacuum applications.

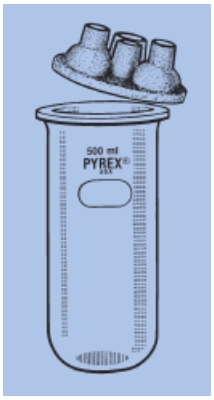
Cat. No.	Approx. O.D. x Height (mm)	Approx. O.D. x Height (Inches)	Capacity (Liters)	Qty/Cs
6945-6L	152 x 457	6 x 18	6.6	1
6945-13L	222 x 457	8 3/4 x 18	13.2	4
6945-36L	305 x 610	12 x 24	36.0	1

KETTLES

6946A PYREX Brand, Cover, Reaction Kettle, Four-Neck, O-Ring Seal

Cover has sturdy wall and a tooled flat flange at bottom which has a groove in the face to take an O-ring for a greaseless tight seal. Center neck and three side necks are 120° apart. All four necks have full length ⧩ outer joints. Viton® O-ring must be ordered separately.

Cat. No.	Center Neck ⧩ Joint	Side Neck ⧩ Joints	O.D. of Flange (Inches)	Qty/Cs
6946A-2929	29/42	29/42	5-3/8	1
6946A-2929L	29/42	29/42	6-5/8	1



6947 PYREX Brand, Resin Reaction

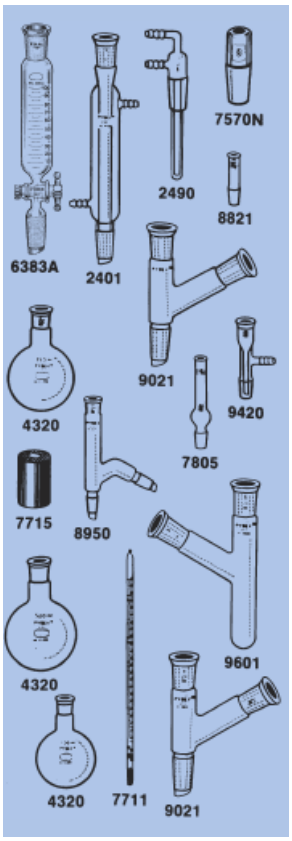
The 500 and 1000 mL kettles have interchangeable covers with four openings to accommodate 24/40 ⧩ joints. Kettles of 2000, 3000, and 4000 mL capacity have interchangeable covers and have openings to accommodate three ⧩ 24/40 joints and one ⧩ 34/45 joint. Interchangeable ⧩ joints allow quick assembly with condensers, stirrers and funnels. Flanges of covers and bottoms are finely ground for a tight seal. For use with heating mantle only.

Cat. No.	Description	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
6947-500	Complete	500	133 x 207	–	1
6947-1L	Complete	1000	133 x 220	–	1
6947-2L	Complete	2000	140 x 239	–	1
6947-3L	Complete	3000	140 x 315	–	1
6947-4L	Complete	4000	140 x 395	–	1
6947-500BO	Bottom only	500	95 x 152	1	4
6947-1LBO	Bottom only	1000	108 x 165	–	4
6947-2LBO	Bottom only	2000	140 x 184	1	4
6947-3LBO	Bottom only	3000	140 x 260	1	4
6947-4LBO	Bottom only	4000	140 x 340	–	4
6947-2LCO*	Cover only	–	168 x 55	–	2
6947-500CO**	Cover only	–	137 x 55	1	2

*Fits 2L, 3L, and 4L.
**Fits 500 and 1000 mL.

CHEMISTRY KITS

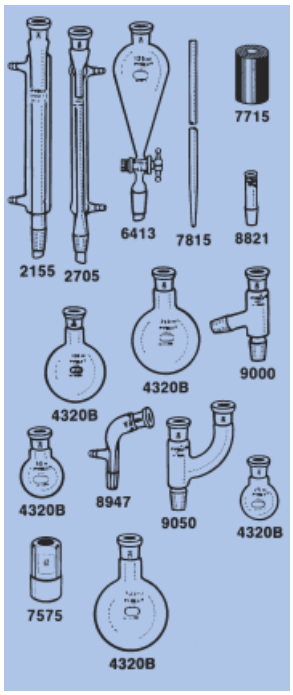
6949 CORNING® Brand, ⅋ 24/40 Components



This basic kit is supplied complete with drawer-size polyethylene case in which components are mounted in foam. The kit's versatility enables many standard laboratory operations to be performed, such as: distillation, reaction with gas evolution, preparation or recovery, simple reflux, reflux with addition, fractional distillation and vacuum distillation.The case is approximately 130 mm x 256 mm x 343 mm. For more detail on individual components of the kit and available parts, refer to the specific catalog numbers.

Cat. No.	Description	Qty/Pk	Qty/Cs
6949	Complete Kit	–	1
2401-24	Condenser Column, Liebig	–	1
2490-24	Condenser, Cold Finger	–	1
4320-100	Round Bottom Boiling Flask, 100 mL	2	12
4320-250	Round Bottom Boiling Flask, 250 mL	2	12
4320-500	Round Bottom Boiling Flask, 500 mL	2	12
6383A-100	Funnel, Graduated, 100 mL, Cylindrical, PTFE Stopcock	–	1
6949N-IO	Foam Insert Only	–	1
6949N-BO	Polyethylene Box Only	–	1
7570N-24	PYREX® Stopper	–	6
7711	Thermometer	–	1
7715	Thermometer Holder, Rubber	–	1
7805-24	Tube, Drying	–	1
8821-24	Tube, Adapter Outlet	–	1
8950-24	Tube, Adapter, Distilling	–	1
9021-24	Tube, Adapter, Connecting (2 per kit)	–	1
9420-24	Tube, Adapter, Vacuum Distilling	1	6
9601-24	Tube, Reaction Vessel	–	1

6949E CORNING Brand, ⅋ 19/22 Components



Similar to Cat. No. 6949, as many of the same standard laboratory experiments can be performed with this kit. It includes a distillation column and bleed tube for steam distillation or gas flow reactions. The components of the kit are held in foam within a polyethylene case. The overall case size is approximately 130 mm x 256 mm x 343 mm. For more detail on individual components of the kit and available parts, refer to the specific catalog numbers.

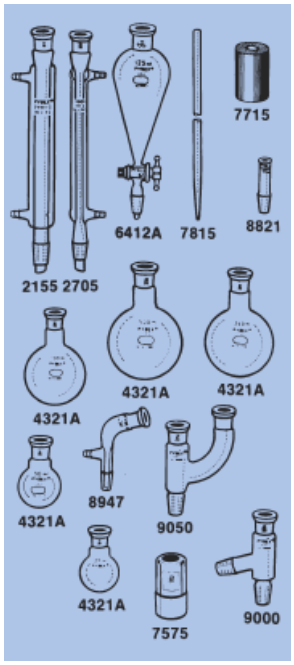
Cat. No.	Description	Qty/Pk	Qty/Cs
6949E	Complete Kit	–	1
2155-19	Distilling Column, 190 mm	–	1
2705-19	Condenser, West, 190 mm	2	4
4320B-25	Round Bottom Boiling Flask, 25 mL	–	1
4320B-50	Round Bottom Boiling Flask, 50 mL	–	1
4320B-100	Round Bottom Boiling Flask, 100 mL	2	12
4320B-250	Round Bottom Boiling Flask, 250 mL	–	1
4320B-500	Round Bottom Boiling Flask, 500 mL	–	1
6413-125	Funnel, Separatory, Addition, Pear-Shaped, 125 mL, Teflon® Stopcock	1	4
6949E-BO	Polyethylene Kit Box Only	–	1
6949E-IO	Foam Insert Only	–	1
7575-19	PYREX® Stopper	–	6
7715	Thermometer Holder, Rubber	–	1
7815-19	Tube, Bleed	–	1
8821-19	Tube, Adapter, Straight, with Thermometer Opening	–	1
8947-19	Tube, Connecting, Vacuum	1	6
9000-19	Tube, Connecting, 3-Way	–	1
9050-19	Tube, Connecting, Claisen	–	1

6949G-2 CORNING® Brand, ⅋ 19/22 Components, Two PYREX® Stoppers

Provides equipment for most common organic laboratory experiments described under 6949A. Note in particular the inclusion of a 250 mL flask with side tubulation, which is useful when performing steam distillations or experiments requiring an air bleed. This kit contains a three neck boiling flask to enable distillation while stirring and adding other compounds. The components of the kit are held in foam within a polyethylene case. The overall size of the case is approximately 130 mm x 256 mm x 343 mm. For more detail on individual components of the kit and available parts, refer to the specific Cat. Nos.

Cat. No.	Description	Qty/Pk	Qty/Cs
6949G-2	Complete Kit	–	1
7715	Thermometer Holder, Rubber	–	1
2155-19	Distilling Column, 190 mm	–	1
2705-19	Condenser, West, 190 mm	2	4
4320B-25	Round Bottom Boiling Flask, 25 mL	–	1
4320B-50	Round Bottom Boiling Flask, 50 mL	–	1
4320B-100	Round Bottom Boiling Flask, 100 mL	2	12
4323A-250	Round Bottom Boiling Flask, 250 mL, Side Tubulation	–	1
4965B-500	Round Bottom, 3-Neck Boiling Flask, 500 mL	–	1
6413-125	Funnel, Separatory, Addition, Pear-Shaped, 125 mL, Teflon® Stopcock	1	4
6949E-BO	Polyethylene Kit Box Only	–	1
6949E-IO	Foam Insert Only	–	1
7575-19	PYREX® Stopper	–	6
7815-19	Tube, Bleed	–	1
8821-19	Tube, Adapter, Straight, with Thermometer Opening	–	1
8947-19	Tube, Connecting, Vacuum	1	6
9000-19	Tube, Connecting, 3-Way	–	1
9050-19	Tube, Connecting, Claisen	–	1

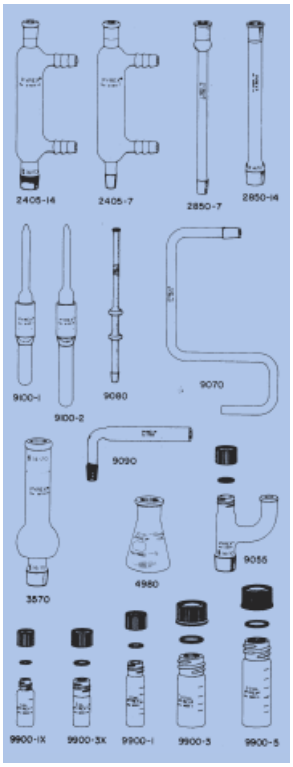
6949K CORNING Brand, ⅋ 14/20 Components



Similar to Cat. No. 6949E, except the component parts have a ⅋ 14/20 joint. The components are held in foam within a polyethylene case. The case is approximately 130 mm x 256 mm x 343 mm. For more detail on individual components of the kit and available parts, refer to the specific product catalog numbers.

Cat. No.	Description	Qty/Pk	Qty/Cs
6949K	Complete Kit	–	1
2155-14	Distilling Column, 190 mm	–	1
2705-14	Condenser, West, 190 mm	–	1
4321A-25	Round Bottom Boiling Flask, 25 mL	–	1
4321A-50	Round Bottom Boiling Flask, 50 mL	–	1
4321A-100	Round Bottom Boiling Flask, 100 mL	1	12
4321A-250	Round Bottom Boiling Flask, 250 mL	–	1
4321A-500	Round Bottom Boiling Flask, 500 mL	–	1
6412A-125	Funnel, Separatory, Addition, Pear-shaped, 125 mL, Teflon Stopcock	–	1
6949E-BO	Polyethylene Kit Box Only	–	1
6949E-IO	Foam Insert Only	–	1
7575-14	PYREX Stopper	–	6
7715	Thermometer Holder, Rubber	–	1
7815-19	Tube, Bleed	–	1
8821-14	Tube, Adapter, Straight, withThermometer Opening	–	1
8947-14	Tube, Connecting, Vacuum	–	1
9000-14	Tube, Connecting, 3-Way	–	1
9050-14	Tube, Connecting, Claisen	–	1

6949M-1 PYREX® Brand, Deluxe Version, Micro-Organic, ⅋ 7/10-14/10 Components

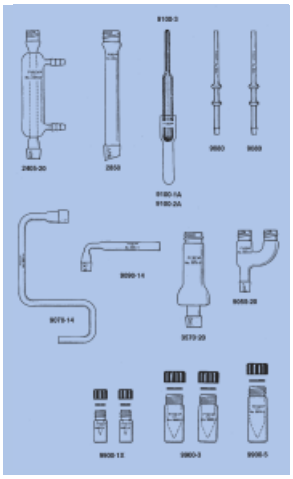


The deluxe micro-organic kit is supplied with all the necessary components needed to perform experiments covered in the Mayo, Pike, Butcher text, *Microscale Organic Laboratory*.* Components come in ⅋ 7/10 and 14/10 joint sizes. A selection of conical reaction vials from 0.1 mL to 5.0 mL capacity is included. All components are mounted in foam within a polyethylene case for easy storage.

Cat. No.	Description	Qty/Pk	Qty/Cs
6949M-1	Kit Deluxe	–	1
2405-7	Jacketed Condenser, 7/10M-7/10F	1	2
2405-14	Jacketed Condenser, 14/10M-7/10F	1	2
2850-7	Air Reflux Condenser, 7/10M-7/10F	2	6
2850-14	Air Reflux Condenser, 14/10M-7/10F	2	6
3570-14	Hickman Still Head, 14/10M-14/20F	1	2
4980-10	Flask, 10 mL	–	12
9055-14	Claisen Head, 14/10M-7/10F	1	6
9070-7	Capillary Gas Delivery Tube, 7/10M	1	4
9080	Gas Chromatograph Collection Tube, 5/5M	1	6
9090-7	Drying Tube, 7/10M	1	6
9100-1	Craig Recrystallization Tube, 1 mL	2	6
9100-2	Craig Recrystallization Tube, 2 mL	2	6
9900-1X	Conical Reaction Vial, 0.1 mL, 5/5F	6	12
9900-1	Conical Reaction Vial, 1.0 mL, 7/10F	6	12
9900-3X	Conical Reaction Vial, 0.3 mL, 7/10F	6	12
9900-3	Conical Reaction Vial, 3.0 mL, 14/10F	6	12
9900-5	Conical Reaction Vial, 5.0 mL, 14/10F	6	12

*Published by John F. Wiley.

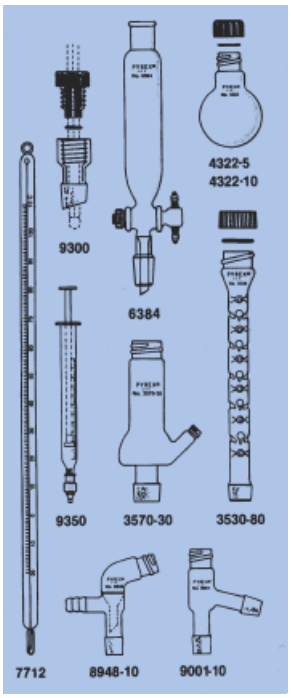
6949M-4 PYREX Brand, Deluxe Version, Micro-Organic, ⅋ 14/10



Threaded ComponentsThe deluxe micro-organic kit is supplied with all the necessary components needed to perform experiments covered in the Mayo, Pike, Butcher text, *Microscale Organic Laboratory*.* Components come in ⅋ 14/10 threaded joint sizes. A selection of conical reaction vials from 0.1 mL to 5.0 mL capacity is included. The Craig Recrystallization tube has a Teflon® plug which eliminates breakage normally associated with glass plugs. All components are mounted in foam within a polyethylene case for easy storage.

Cat. No.	Description	Qty/Pk	Qty/Cs
6949M-4	Kit Deluxe Threaded	–	1
2405-20	Jacketed Condenser, 14/10 Threaded	1	2
2850-20	Air Reflux Condenser, 14/10 Threaded	2	6
3570-20	Hickman Still Head, 14/10 Threaded	1	2
9055-20	Claisen Head, 14/10 Threaded	2	6
9070-14	Capillary Gas Delivery Tube, 14/10	2	4
9080	Gas Chromatograph Collection Tube, 5/5M	1	6
9090-14	Drying Tube, 14/10	2	6
9100-1A	Craig Receiver Only, 1 mL	2	6
9100-2A	Craig Receiver Only, 2 mL	2	6
9100-3	Teflon Plug Only for Craig Tube	1	6
9900-1X	Conical Reaction Vial, 0.1 mL, 5/5F	6	12
9900-3	Conical Reaction Vial, 3.0 mL, 14/10F	6	12
9900-5	Conical Reaction Vial, 5.0 mL, 14/10F	6	12

*Published by John F. Wiley.

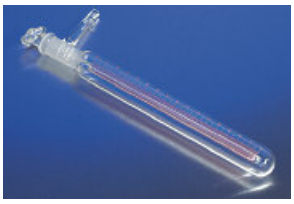


6949M PYREX® Brand, Accessories for Microscale Chemistry Kits

Listed are additional items most often used in conjunction with the 6949M series Microscale Organic Chemistry Kits. Items include round bottom flasks, sep. funnels, distillation columns, Hickman still heads, thermometers, vacuum adaptors, connecting tubes, syringes, crystallizing dishes, GC adaptors, spin vanes, replacement vial caps, O-rings and septa.

Cat. No.	Description	Qty/ Pk	Qty/ Cs
2690-40	Mineral Oil Bubbler	–	1
3140-70	3140 Dish 70 x 50	6	24
3140-80	3140 Dish 80 x 40	6	24
3140-90	3140 Dish 90 x 50	6	18
3140-100	3140 Dish 100 x 50	6	18
3140-125	3140 Dish 125 x 65	4	12
3140-150	3140 Dish 150 x 75	4	8
3530-80	3530 Distillation Column Vigreux with Cap 75 mm 14/10 Threaded	1	2
3570-30	3570 Hickman Still Head with Sidearm Port/Cap 14/10	1	2
3570-50	Spinning Hickman with Sideport	1	2
4321A-5	4321A Flask 5 mL	2	12
4321A-10	4321A Flask 10 mL	2	12
4322-5	4322 Flask RB 5 mL 14/10 with Cap	2	12
4322-10	4322 Flask RB 10 mL 14/10 with Cap	2	12
4322S-10	Flask Round Bottom 10 mL	–	2
36062-18C	Buchner Filter Funnel	–	1
36210-14C	Hirsch Filter Funnel	–	1
6384-25	6384 Sep. Funnel Cylindrical 25 mL, 2 mm TFE Stopcock, 14/10	1	2
6949M-CB	Clear Compartment Box	–	1
7095B-5X	Pipet, Pasteur 5 ¾"	50	1000
7095B-9	Pipet, Pasteur 9"	50	1000
7711	7711 Thermometer	–	1
7712	7712 Thermometer Bulb Immersion Micro	1	2
8830	8830 Gas Chromatograph Connection Adaptor 6-32 NPT - 5/5F	6	12
8948-10	8948 Vacuum Adaptor with Hose Connection 14/10 Threaded	–	2
9001-10	9001 Connecting Tube 14/10 Threaded Top	1	2
9300-14	9300 Thermometer Adaptor Assy. 14/10 (Bushing, O-Ring, Adaptor)	–	2
9300-24	Vacuum Adaptor with Sideport	–	1
9300-34	Sublimation Condenser Tube Only	–	1
9350-1	9350 Syringe 1 mL with TFE Tip Plunger, without Needle	1	2
9900-1C	9900-1C Cap for 0.1 mL Vial	–	12
9900-3C	9900-3C Cap for 0.3/1.0 mL Vial	–	12
9900-5C	9900-5C Cap for 3.0/5.0 mL Vial	–	12
9900-1R	9900-1R O-Ring for 0.1 mL Vial	–	12
9900-2R	9900-2R O-Ring for 0.3/1.0 mL Vial and Claisen Adaptor	–	12
9900-3R	9900-3R O-Ring for 3.0/5.0 mL Vial	–	12
9900-1S	9900-1S Teflon Silicone Septa for 0.1 mL Vial	–	12
9900-2S	9900-2S Teflon Silicone Septa for 0.3/1.0 mL Vial	–	12
9900-3S	9900-3S Teflon Silicone Septa for 3.0/5.0 mL Vial	–	12
9900-1V	9900-1V Spin Vane for 1.0 mL Vial	–	6
9900-3V	9900-3V Spin Vane for 3.0/5.0 mL Vial	–	6

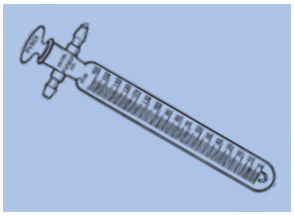
MANOMETERS



6950 PYREX® Brand, Vacuum, Mercury, ⅋ Stopper

The manometer tube is enclosed in a round bottom, graduated jacket and is sealed to a stopcock plug. In use, mercury is placed in the inner tube and in the jacket bottom to measure the pressure differential. Not recommended for positive pressure. The legible, red scale ranges from 0 to 160 mm. Mercury filling instructions are supplied with each instrument. Uses 5 to 6 mL mercury. Mercury not supplied.

Cat. No.	Description	Approx. O.D. x Height (mm)	Approx. Tubulation O.D. (mm)	Qty/Pk	Qty/Cs
6950-235	Complete	25 x 235	10	1	4



6952 PYREX Brand, Vacuum, Mercury, T Connection, ⅋ Stopper

The manometer tube is enclosed in a round bottom, graduated jacket and is sealed to a stopcock plug. T-sidearm permits drawing and venting the vacuum. In use, mercury is placed in the inner tube and in the jacket bottom to measure the pressure differential. The legible red scale ranges from 0 to 160 mm. Not recommended for positive pressure. Mercury filling instructions are supplied with each instrument.Uses 5 to 6 mL mercury. Mercury not supplied.

Cat. No.	Description	Approx. O.D. x Height (mm)	Approx. Tubulation O.D. (mm)	Qty/Cs
6952-235	Complete	25 x 235	10	1

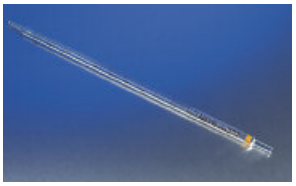
PIPETS

7065 PYREX Brand, Reusable Glass, Measuring, Color-Coded, with Colored Markings

These pipets are color-coded by size for easy identification and sorting. Colored graduations are enameled onto the glass. The top end of 5 to 25 mL sizes is constricted (Mohr type). They are calibrated “to deliver” their total capacity without blow-out.

Cat. No.	Capacity (mL)	Tol. (± mL)	Grad. Interval (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
7065-1X	0.1	.005	.01	7 x 300	6	12
7065-2X	0.2	.008	.01	7 x 300	6	12
7065-1	1.0	.02	.1	7 x 325	6	12
7065-1C	1.0	.02	.01	7 x 350	6	12
7065-2	2.0	.02	.1	7 x 350	6	12
7065-5	5.0	.04	.1	8 x 350	6	12
7065-10	10.0	.06	.1	10 x 380	6	12
7065-25	25.0	.1	.1	14 x 440	–	12

Do not pipet by mouth. We suggest using a mechanical pipetting device.
Reference: ASTM E-1293.

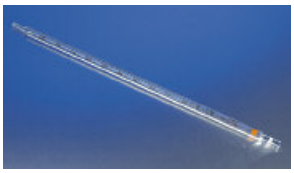


7070 PYREX Brand, Reusable Glass, Serialized/Certified, Class A, Colored Markings, Measuring, Color-Coded

Calibrated to Class A tolerances in accordance with ASTM E-542, and ASTM E-1293. Each pipet is individually serialized and supplied with a Certificate of Identification and Capacity, traceable to NIST standards. Calibrated “to deliver” their total capacity without blow-out. Color-coded by size for easy identification. Colored graduations are enameled onto the glass. The top end of 5 to 25 mL sizes is constricted (Mohr type).

Cat. No.	Capacity (mL)	Grad. Interval (mL)	Tol. (± mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
7070-1	1.0	.1	.01	7 x 325	2	6
7070-2	2.0	.1	.01	7 x 350	2	6
7070-5	5.0	.1	.02	8 x 350	2	6
7070-10	10.0	.1	.03	10 x 380	2	6
7070-25	25.0	.1	.05	14 x 440	2	6

Do not pipet by mouth. We suggest using a mechanical pipetting device.

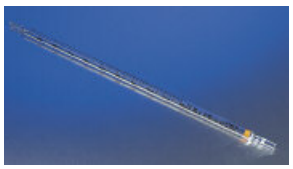


7085 PYREX® Brand, Reusable Glass Serological, Color-Coded, Colored Markings

These pipets are color coded by size for easy identification and sorting. Colored graduations are enameled onto the glass. These "to deliver" pipets must be blown out to obtain total rated capacity.

Cat. No.	Capacity (mL)	Tolerance (± mL)	Grad. Interval (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
7085-1X	0.1	.005	.01	7 x 300	6	12
7085-2X	0.2	.008	.01	7 x 300	6	12
7085-1	1.0	.02	.1	7 x 350	6	12
7085-1C	1.0	.02	.01	7 x 350	6	12
7085-2	2.0	.02	.1	7 x 350	6	12
7085-2C	2.0	.02	.01	7 x 350	6	12
7085-5	5.0	.04	.1	8 x 350	6	12
7085-10	10.0	.06	.1	10 x 350	–	12

Do not pipet by mouth. We suggest using a mechanical pipetting device.
Reference: ASTM E-1044.

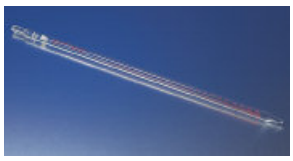


7086 PYREX Brand, Reusable Glass Serological, Color-Coded, Color Markings

These pipets are designed for cotton plugging. The uniform top-end openings permit performing of plugs and allow precise control of liquid column. Color-coded by size for easy identification and sorting. Colored graduations are enameled onto the glass. The two rings indicate the pipet is calibrated "To Deliver" its total capacity when the last drop is blown out. Reference: ASTM® E-1044.

Cat. No.	Capacity (mL)	Tol. (± mL)	Grad. Interval (mL)	Approx. O.D. x Height mm	Qty/Pk	Qty/Cs
7086-1	1	0.02	0.1	7 x 350	6	12
7086-5	5	0.04	0.1	8 x 350	6	12
7086-10	10	0.06	0.1	10 x 350	6	12

Do not pipet by mouth. We suggest using a mechanical pipetting device.



7087 PYREX Brand, Reusable Glass Serological, Large Tip Opening, Color-Coded, Colored Markings

Made with a large tip opening to allow more rapid intake and delivery of suspensions and viscous materials. Color coded by size for easy identification and sorting. Colored graduations are enameled onto the glass. The two narrow bands or one wide band at the top indicate the pipet is calibrated "to deliver" its total capacity when the last drop is blown out.

Cat. No.	Capacity (mL)	Grad. Range (mL)	Tolerance (± mL)	Grad. Interval (mL)	Approx. O.D. x Length (mm)	Qty/ Pk	Qty/ Cs
7087-1	1.0	0-0.9	.05	.1	7 x 350	6	12
7087-2	2.0	0-1.9	.05	.1	7 x 350	6	12
7087-5	5.0	0-4.9	.1	.1	8 x 350	6	12
7087-10	10.0	0-9.5	.1	.1	10 x 350	–	12
7087-25	25.0	0-24	.2	.1	14 x 440	–	12

Do not pipet by mouth. We suggest using a mechanical pipetting device.

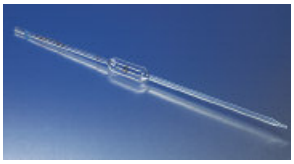
7100 PYREX® Brand, Reusable Glass Volumetric, Class A, Color-Coded, Colored Markings

These pipets are manufactured to Class A capacity tolerances as indicated by ASTM E-969.The rugged construction, Colored enamel graduations and markings provide a pipet which will give good life and service. Sizes 1 mL through 25 mL are color-coded.

Cat. No.	Color Code	Capacity (mL)	Tolerance (± mL)	Approx. Length (mm)	Qty/Cs
7100-1	Blue	1.0	.006	313	12
7100-2	Orange	2.0	.006	333	12
7100-3	Black	3.0	.01	356	12
7100-4	Red	4.0	.01	370	12
7100-5	White	5.0	.01	392	12
7100-10	Red	10.0	.02	429	12
7100-15	Green	15.0	.03	400	12
7100-20	Yellow	20.0	.03	460	12
7100-25	Blue	25.0	.03	460	12
7100-50*	–	50.0	.05	516	12
7100-100	–	100.0	.08	565	12

*New design allows more complete and efficient drainage. Do not pipet by mouth. We suggest using a mechanical pipetting device.

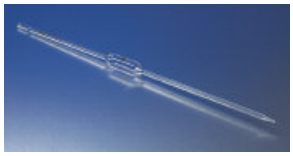
7101 PYREX Brand, Serialized/Certified, Class A, Volumetric, Color-Coded, Colored Graduations



Calibrated to Class A tolerances in accordance with ASTM E-542, and ASTM E-969. Each pipet is individually serialized and supplied with a Certificate of Identification and Capacity, traceable to NIST standards. Sizes 1mL through 25mL are color-coded with colored graduations enameled onto the glass.

Cat. No.	Color Code	Capacity (mL)	Tol. ± (mL)	Approx. Length (mm)	Qty/Pk	Qty/Cs
7101-1	Blue	1.0	.006	313	2	6
7101-2	Orange	2.0	.006	333	2	6
7101-3	Black	3.0	.01	356	2	6
7101-4	Red	4.0	.01	370	2	6
7101-5	White	5.0	.01	392	2	6
7101-10	Red	10.0	.02	429	2	6
7101-15	Green	15.0	.03	445	2	6
7101-20	Yellow	20.0	.03	516	2	6
7101-25	Blue	25.0	.03	521	2	6
7101-50	–	50.0	.05	516	2	6
7101-100	–	100.0	.08	565	2	6

Do not pipet by mouth. We suggest using a mechanical pipetting device.

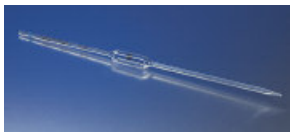


7102 PYREX® Brand, Reusable Glass Volumetric, Color-Coded

These pipets were designed primarily for schools and laboratories where the Class A tolerance of Cat. No. 7100 is not required. They are constructed to the same wall thickness and length as our Cat. No. 7100, but have larger tip openings for faster delivery. It is primarily due to this faster delivery that accuracy tolerances are twice those specified for Class A volumetric ware. Sizes 0.5 mL through 25mL are color-coded.

Cat. No.	Color Code	Capacity (mL)	Tol. ± (mL)	Approx. Length (mm)	Qty/Pk	Qty/Cs
7102-1X	Black (2)	.5	.012	318	6	12
7102-1	Blue	1.0	.012	313	6	12
7102-2	Orange	2.0	.012	333	6	12
7102-3	Black	3.0	.02	356	6	12
7102-4	Red	4.0	.02	370	6	12
7102-5	White	5.0	.02	392	6	12
7102-10	Red	10.0	.04	429	6	12
7102-15	Green	15.0	.06	400	6	12
7102-20	Yellow	20.0	.06	460	6	12
7102-25	Blue	25.0	.06	460	6	12
7102-50*	–	50.0	.10	516	6	12
7102-100	–	100.0	.16	565	6	12

Do not pipet by mouth. We suggest using a mechanical pipetting device.
*New design allows more complete and efficient drainage.
Reference: ASTM E-969.



7103 PYREX Brand, Reusable Glass, Volumetric, To Contain, To Deliver, Class A

These precision pipets are manufactured and calibrated "To Contain" (bottom line) and "To Deliver" (top line) to specifications for Class A volumetric ware.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. Length (mm)	Color Code	Qty/Cs
7103-1	1	0.006	313	Blue	6
7103-2	2	0.006	333	Orange	6
7103-3	3	0.01	356	Black	6
7103-4	4	0.01	370	Red	6
7103-5	5	0.01	392	White	6
7103-6	6	0.01	420	Orange	6
7103-7	7	0.01	420	Green	6
7103-8	8	0.02	425	Blue	6
7103-9	9	0.02	425	Black	6
7103-10	10	0.02	429	Red	6
7103-15	15	0.03	445	Green	6
7103-20	20	0.03	516	Yellow	6
7103-25	25	0.03	521	Blue	6

Do not pipet by mouth. We suggest using a mechanical pipetting device.

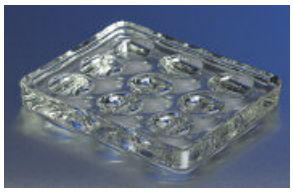
7105 PYREX® Brand, Reusable Glass Blood Chemistry (Ostwald-Folin), Class A, Color-Coded, Colored Markings

These precision pipets meet or exceed specifications for Class A volumetric ware as indicated by ASTM E-969. Shorter, and more compact than our Class A No. 7100 types, these pipets originally were suggested by Folin for use in determining total nitrogen, urea and ammonia in urine, and they are generally used for blood serum tests. They are calibrated "to deliver" by blowing out the last drop. Colored graduations are enameled onto the glass.

Cat. No.	Color Code	Capacity (mL)	Tol. (± mL)	Approx. Length (mm)	Qty/Pk	Qty/Cs
7105-1	Blue	1.0	.006	275	6	12
7105-2	Orange	2.0	.006	275	6	12
7105-3	Black	3.0	.01	300	6	12
7105-5	White	5.0	.01	325	6	12

PLATES

7220 PYREX Brand, Nine Depression Spot Plates

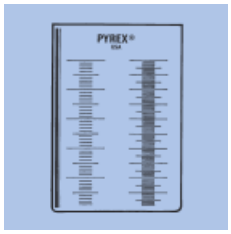


These pressed plates have concave depressions which are useful for soil chemistry, color reactions, microchemical applications and microscopic observations. Nine concave depressions 22 mm O.D. x 7 mm deep.

Cat. No.	Approx. Size (mm)	Qty/Pk	Qty/Cs
7220-85	85 x 100	6	18

SETTLOMETER

7250 PYREX Brand, Mallory Direct Reading Settlometer



Used with oxidized sludge process for treatment of sewage and other wastes. 2000 mL heavy wall cylinder measures 5 ⅛" I.D. x 7 ½" high and is graduated in cc per liter, and in hundredths of a foot.

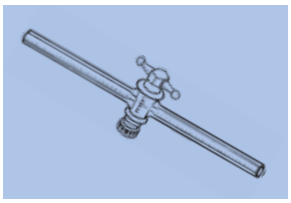
Cat. No.	Description	Qty/Cs
7250-2L	Direct Reading Settlometer	1

STOPCOCKS

7280 PYREX Brand, Straight Bore, Solid ⅋ Stopper Plug

Closely controlled grinding techniques allow this general use stopcock to be used at pressures down to 10-4 torr (mm Hg) when correctly greased. For additional strength, sidearm seals are heavy and uniform.

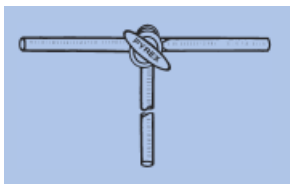
Cat. No.	Description	Approx. Plug Bore (mm)	⅋ Stopcock Plug No.	Approx. O.D. x Length (mm)	Sidearms Retaining Clip No.	Qty/ Pk	Qty/ Cs
7280-1	Complete	1	1	8 x 250	1	–	1
7280-2	Complete	2	2	8 x 250	1	2	8
7280-3	Complete	3	3	10 x 220	4	–	1
7280-4	Complete	4	4	10 x 255	4	2	8
7280-1CO	Retaining Clip	–	–	–	1	–	6
7280-4CO	Retaining Clip	–	–	–	4	–	6



7282 PYREX® Brand, Straight Bore, ℰ Teflon Plug

The ℰ taper Teflon plug fits into a micro-finish barrel. Freezing problems are reduced and greasing is eliminated. The very fine threads on the plug and nut let you "feel" the position of the plug. Sidearm seals are heavy and strong for greater durability and easier handling.

Cat. No.	Description	Approx. Plug Bore (mm)	Approx. O.D. x Length of Sidearms (mm)	Qty/Pk	Qty/Cs
7282-1	Complete	1	8 x 300	–	1
7282-2	Complete	2	8 x 300	2	6
7282-3	Complete	3	10 x 300	–	1
7282-4	Complete	4	10 x 300	2	6
7282-6	Complete	6	12 x 325	–	1



7420 PYREX Brand Three-way, T Shaped, Solid $ Stopper Plug

This stopcock is T-shaped and has T bores, ideal for gas analysis manifolds.

Cat. No.	Approx. Plug Bore (mm)	$ Stopcock Plug No.	Approx. O.D. x Length of Sidearms (mm)	Retaining Clip No.	Qty/Pk	Qty/Cs
7420-2	2	2	8 x 300	4	2	8

7470 PYREX Brand Body, Rotaflo® PTFE High Performance Plug, Two-Way, In-Line, Plain Bore

Cat. No.	Bore (mm)	Approx. Length (mm)	Approx. O.D. of Sidearms (mm)	Qty/Cs
7470-3	0-3	210	8	1
7470-6	0-6	210	10	1
7470-10	0-10	224	13	1

7473 PYREX Brand Body, Rotaflo PTFE High Performance Plug, Two-Way, 90° Angle, Plain Bore

Cat. No.	Bore (mm)	Approx. Height (mm)	Approx. Sidearm Length (mm)	Approx. O.D. of Sidearms (mm)	Qty/Cs
7473-3	0-3	155	102	8	1
7473-6	0-6	160	102	10	1
7473-10	0-10	175	102	13	1

7475 PYREX Brand Body, Rotaflo PTFE High Performance Plugs, Three-Way, Plain Bore

Cat. No.	Bore (mm)	Approx. Overall Length (mm)	Approx. O.D. of Sidearms (mm)	Qty/Cs
7475-3	0-3	215	8	1
7475-6	0-6	220	10	1

7680 PYREX Brand, Stopcock Plug, Solid, Straight Bore

Since several different bored sizes may be drilled through any given size of plug, the approved method of designating the size of a $ stopcock is by bore diameter only.Interchangeable ground glass stopcocks are not intended for high vacuum apparatus or for use with light liquids. When, by constant abrasion, a stopcock has become so worn that the shell is enlarged, or the plug is diminished in size, oit is recommended that you replace the plug.

Cat. No.	$ Plug No.	Approx. Length of Ground Zone (mm)	Stopper Bore (mm)	Retaining Clip No.	Qty/Cs
7680-1	1	30	1	1	1
7680-2	2	30	2	1	1
7680-3	3	40	3	4	1
7680-4	4	40	4	4	1
7680-6	6	44	6	5	1

7681 PYREX® Brand, Plug Assembly, Straight Bore, Teflon®

Cat. No.	Approx. Plug Bore (mm)	O-Ring Size	Qty/Cs
7681-1	1	A	1
7681-2	2	A	1
7681-3	3	B	1
7681-4	4	B	1
7681-8	8	C	1
7681-6	6	B	1

STOPPERS, CAPS, AND CLOSURES

7570N PYREX Brand, Ground Joint

Hollow, full length stopper closed at the bottom. Interchangeable with standard taper joints.

Cat. No.	Ground Joint Size	Height Above Ground Joint (mm)	Qty/Pk	Qty/Cs
7570N-24	24/40	40	–	6
7570N-10	10/30	31	1	6
7570N-19	19/38	33	–	6

7575 PYREX Brand, Combination Reagent Bottle/Ground Joint, Hollow

Cat. No.	Bottle Size	Ground Joint	Height Above Ground Joint (mm)	Qty/Cs
7575-14*	14	14/20	28	6
7575-19**	19	19/22	32	6
7575-24	24	24/30	41	6
7575-29	29	29/35	41	6

*The 7575-14 is a replacement part for organic chemistry kit no. 6949K.
**The 7575-19 is a replacement part for organic chemistry kits nos. 6949E, 6949F, and 6949G-2.

7620 PYREX Brand, Solid, Improved Form

Cat. No.	Stopper No.	Approx. Length of Ground Zone (mm)	Qty/Pk	Qty/Cs
7620-19	19	22	–	1
7620-24	24	30	36	6

7624 PYREX Brand, HDPE Polyethylene, Improved Form

These blue and white stoppers are made with closed bottoms, of linear high-density polyethylene to conform to stopper dimensions. The three unit rings on the base provide an efficient seal. The improved design fully protects the neck in the event of accidental tipping.These stoppers may be used in place of the conventional flask stoppers.

Cat. No.	Stopper No.	Qty/Cs
7624-8	8	6
7624-9	9	6
7624-13	13	6
7624-16	16	6
7624-19	19	6
7624-22	22	6
7624-27	27	6
7624-32	32	6
7624-38	38	6

7630 PYREX® Brand, PTFE, ⧩, Key-Hole, Color-Coded

These stoppers are made to conform to ⧩ stopper dimensions. The color-coded keys make sorting and selecting the correct size much faster and easier. These stoppers may be used in place of the conventional ⧩ flask stopper.

Cat. No.	⧩ Stopper No.	Color	Qty/Pk	Qty/Cs
7630-8	8	Gray	2	6
7630-9	9	Black	2	6
7630-13	13	Orange	2	6
7630-16	16	Blue	2	6
7630-19	19	Green	2	6
7630-22	22	Yellow	2	6
7630-27	27	Red	2	6

7650 PYREX Brand, ⧩, Hollow

The hollow PYREX stopper is light in weight, yet very strong to reduce chipping and breakage, thus minimizing replacement costs. A barrel-shaped head means it is easy to clean and even easier to rotate in or out. Grooves in the sides help prevent slippage. The flat top allows the stopper to stand on its head, which frees the user's hand and minimizes potential contamination. This PYREX stopper is interchangeable with other common flask stoppers and fits all standard labware of comparable ⧩ size.

Cat. No.	⧩ Stopper No.	Approx. Length of Ground Zone (mm)	Height (mm)	Height Above Ground Joint (mm)	Qty/Cs
7650-8	8	10	32	25	6
7650-9	9	14	36	25	6
7650-13	13	14	36	25	6
7650-16	16	15	43	31	6
7650-19	19	17	46	32	6
7650-22	22	20.5	54	38	6
7650-27	27	21.5	54	37	6
7650-32	32	21.5	59.5	44	6
7650-38	38	30.0	77	52	6

7660 PYREX Brand, Solid, Pennyhead

Pennyhead ⧩ stoppers are generally used in flasks and separatory funnels.

Cat. No.	⧩ Stopper No.	Approx. Length of Ground Zone (mm)	Height Above Ground Joint (mm)	Qty/Cs
7660-9	9	14	20	6
7660-13	13	14	25	6
7660-16	16	15	25	6
7660-19	19	17	27	6
7660-22	22	20.5	30	6
7660-27	27	21.5	37	6

7666 PYREX® Brand, LDPE Polyethylene, Snap Cap

These blue caps provide an economical closure for certain volumetric flasks. Refer to volumetric flask listings to determine sizes and whether the flask is designed to take such a cap.

Cat. No.	Snap Cap No.	Qty/Cs
7666-10	10	6
7666-25	25	6
7666-50	50	6
7666-100	100	6
7666-200	200	6
7666-250	250	6
7666-500	500	6
7666-1L	1000	6
7666-2L	2000	6

9998 CORNING® Brand, Phenolic, Teflon® Liner

This cap is fabricated of a resin specially formulated to resist the effects of temperature and steam in autoclaving. Caps are provided with a glued-in rubber liner over which is firmly bonded a Teflon interface which provides a highly inert sealing face.

Cat. No.	G.P.I. Thread Finish	Approx. Outside Height (mm)	Qty/Cs
9998-24	24-400	12.5	12
9998-241	24-410	18.5	144
9998-13	13-415	13.5	288
9998-15	15-415	16.0	288
9998-18	18-415	17.5	192

9999 CORNING Brand, Phenolic, Rubber Liner

These caps are fabricated of a resin specially formulated to resist the effects of temperature and steam in autoclaving. Caps have a glued-in, white rubber liner.

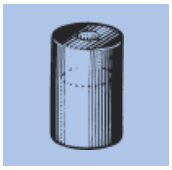
Cat. No.	G.P.I. Thread Finish	Approx. Outside Height (mm)	Qty/Pk	Qty/Cs
9999-24	24-400	12.5	–	12
9999-28	28-400	12.5	–	144
9999-38	38-400	12.5	36	144
9999-40	40-400	12.5	–	72
9999-241	24-410	18.5	36	144
9999-281	28-410	20.0	–	12
9999-132	13-415	13.5	36	288
9999-152	15-415	16.0	–	288
9999-182	18-415	17.5	32	192
9999-381M	38-430 Deeper Threads	27.0	12	72

THERMOMETERS

7711 CORNING Brand, Mercury, White Back

Cat. No.	Range (°C)	Length (mm)	Qty/Cs
7711	-10° to 300°	370	1

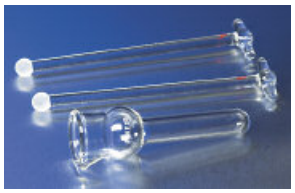
*This thermometer is a replacement part for organic chemistry kits Cat. No. 6949.



7715 CORNING Brand, Rubber Thermometer Holder

Cat. No.	Approx. O.D. x I.D. (mm)	Qty/Cs
7715	17 x 13	1

TISSUE GRINDERS



7722 PYREX® Brand, Tissue Grinder, Dounce, 2 Glass Pestles

Supplied with two pestles to ensure dissociation of cells into fine particles with minimal damage to cell nuclei. Use the large clearance pestle for initial reduction of soft tissue. Complete the homogenization with the small clearance pestle. Particularly useful in enzyme studies where heat build-up must be avoided.

Cat. No.	Description	Approx. Capacity (mL)	Body O.D. x Height (mm)	Qty/Cs
7722-7	Tissue Grinder	7	15 x 117	1
7722-15	Tissue Grinder	15	20 x 145	1
7722-40	Tissue Grinder	40	27 x 210	1

7724 PYREX Brand, Tissue Grinder, Glass Pestle

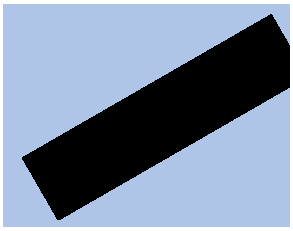
Designed to handle both initial grinding and final homogenization in the same sequence of operations. The lower conical section is intended primarily for the initial grinding. To assist in this work the clearance between mortar and pestle can be adjusted at will by raising or lowering the pestle. The upper cylindrical section is for the final homogenization.

Cat. No.	Description	Approx. Capacity (mL)	Body O.D. x Height	Pestle O.D. x Height (mm)	Qty/Cs
7724-1	Tissue Grinder	1	19 x 83	7 x 155	1
7724-3	Tissue Grinder	3	13 x 125	6 x 208	1
7724-15	Tissue Grinder	15	20 x 175	10 x 267	1
7724-30	Tissue Grinder	30	27 x 220	10 x 305	1
7724-50	Tissue Grinder	50	32 x 225	16 x 345	1
7724-5	Tissue Grinder	5	25 x 150	11 x 225	1

7724T PYREX Brand, Tissue Grinder, PTFE Pestle w/Steel Shaft

Recommended for soft tissues found in the liver and brain. Designed to handle both initial grinding and final homogenization in the same sequence of operations. Mortar is unground and the pestle contact surface is PTFE, threaded onto a stainless steel shaft.

Cat. No.	Description	Approx. Capacity (mL)	Body O.D. x Height (mm)	Qty/Cs
7724T-1	Tissue Grinder	1	13 x 110	1
7724T-3	Tissue Grinder	3	13 x 130	1
7724T-5	Tissue Grinder	5	19 x 150	1
7724T-15	Tissue Grinder	15	25 x 175	1
7724T-30	Tissue Grinder	30	27 x 215	1
7724T-50	Tissue Grinder	50	32 x 225	1



7725 PYREX Brand, Tissue Grinder, Glass Pestle

These tissue grinders (homogenizers) are used in preparing small samples for pathological and biochemical studies. Designed to be motor-driven. Use a friction clutch to eliminate damage to the pestle from pieces of connective tissue or muscle.The clearance between the ground tube and pestle is approximately 0.15 mm. The parts are ground to a medium grind to insure adequate abrasive qualities, yet deliver a fine homogenous sample.

Cat. No.	Description	Working Capacity (mL)	Approx. O.D. x Body Length (mm)	Qty/Pk	Qty/Cs
7725-13	Complete	3	16 x 100	1	4
7725-16	Complete	9	18 x 150	1	4
7725-19	Complete	16	21 x 150	1	4
7725-25	Complete	50	27 x 200	–	1

Caution: If used with a motor-driven device, the attachment must contain some form of friction release clutch to prevent damage to the apparatus. The user should wear a protective glove of sufficient thickness to prevent injury in the event of failure of the glass components.

7725T PYREX® Brand, Tissue Grinder, Potter-Elvehjem, Teflon® Pestle

Homogenization occurs as the sample and buffer are forced through the cylindrical portion of the mortar as the pestle is rotated downward. Mortar is unground and pestle contact surface is PTFE, threaded onto a stainless steel shaft.

Cat. No.	Description	Approx. Capacity (mL)	Body O.D. x Height (mm)	Qty/Cs
7725T-5X	Tissue Grinder	0.5	9x50	1
7725T-1	Tissue Grinder	1	9 x 65	1
7725T-3	Tissue Grinder	3	16 x 70	1
7725T-5	Tissue Grinder	5	16 x 95	1
7725T-8	Tissue Grinder	8	16 x 110	1
7725T-17	Tissue Grinder	17	21 x 150	1
7725T-45	Tissue Grinder	45	27 x 180	1

7726 PYREX Brand, Ten Broeck, Homogenizer

These 40 mL capacity PYREX homogenizers are designed for grinding small samples for pathological and biochemical work. The catch basin bulb has a 55mm outer diameter. Made in accordance with Federal Specification DD-T-363a. It may be used manually but is adaptable for use with a slow speed stirrer by means of a rubber stopper and a connecting rod.

Cat. No.	Description	Size	Mortar Tube O.D. x Length (mm)	Pestle O.D. x Length (mm)	Ground Zone Length (mm)	Approx. Total Length (mm)	Qty/Cs
7726-L	Complete	L	26 x 210	20 x 335	130	340	1

Caution: If used with a motor-driven device, the attachment must contain some form of friction release clutch to prevent damage to the apparatus. The user should wear a protective glove of sufficient thickness to prevent injury in the event of failure of the glass components.

7727 PYREX Brand, Ten Broeck, Homogenizer, Pour Spout

These grinders are designed for use in hand grinding small samples for pathological or biochemical studies. It may also be motor driven at low speed if some form of friction release is provided. The mortar tubes and pestles are ground to be interchangeable. Clearance between the two parts is approximately 0.15 mm. The medium grind provides the required abrasive action to deliver well homogenized samples. Made in accordance with Federal Specification NNN-T-360B.

Cat. No.	Description	Size (mL)	Mortar Tube O.D. x Length (mm)	Pestle O.D. x Length (mm)	Bulb O.D. (mm)	Ground Zone Length (mm)	Pestle Opening Stopper No.	Approx. Total Length (mm)	Qty/ Pk	Qty/ Cs
7727-2	Complete	2	16 x 100	10.5 x 165	20	60	00	170	1	4
7727-7	Complete	7	18 x 130	12.6 x 195	25	80	00	200	1	4
7727-15	Complete	15	21 x 150	15.8 x 235	35	90	1	240	1	4
7727-40	Complete	40	27 x 210	22.1 x 335	50	130	3	340	1	2

Caution: If used with a motor-driven device, the attachment must contain some form of friction release clutch to prevent damage to the apparatus. The user should wear a protective glove of sufficient thickness to prevent injury in the event of failure of the glass components.

TRAPS

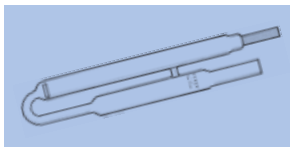
7150 PYREX Brand, Spargers for Tekmar Purge and Trap Equipment

PYREX purge and traps glassware is designed for use in Tekmar® purge and trap equipment.

Cat. No.	Description	Qty/Cs
7150-25	Fritless Sparger, 25 mL (2000)	1
7150-25F	Frit Sparger, 25 mL (2000)	1
7150-5	Fritless Sparger, 5 mL (2000)	1
7150-5F	Frit Sparger, 5 mL (2000)	1

7155 PYREX Brand, Needle Sparger Glassware

Cat. No.	Description	Qty/Cs
7155-25	Needle Sparger, 25 mL	4
7155-5	Needle Sparger, 5 mL	4



7160 PYREX® Brand, Spargers for Tekmar Automatic Samplers

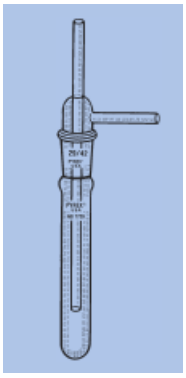
Cat. No.	Description	Qty/Cs
7160-25F	Frit Sparger, 25 mL (ALS and 4000)	1
7160-5F	Frit Sparger, 5 mL (ALS and 4000)	1

7165 PYREX Brand, Spargers for Tekmar Automatic Sample Concentrators

Cat. No.	Description	Qty/Cs
7165-25F	Frit Sparger, 25 mL (LSC-2, LSC-3)	1
7165-5F	Frit Sparger, 5 mL (LSC-2, LSC-3)	1

7175 PYREX brand, Glassware for Tekmar Heated Samplers

Cat. No.	Description	Qty/Cs
7175-150	Sampler, 150 mm	24
7175-4H	Headspace Purge Tube, 4 1/2"	6
7175-9FN	Fritted Purge Tube	1
7175-9N	Needle Purge Tube, 9 1/2"	6



7729 PYREX Brand, Vacuum, Separable, Ʃ Joint

With a full length outer Ʃ joint on the outer tube and an inner Ʃ joint on the inner tube. The top and side tubulations are the same O.D. as the center tube and have a length of 75 mm.

Cat. No.	Description	O.D. x Length Below Joint (mm)	Outer O.D. x Length Below Joint (mm)	Inner Ʃ Joint Size	Qty/Pk	Qty/Cs
7729-28	Complete	28 x 200	10 x 175	29/42	1	4
7729-32	Complete	32 x 225	13 x 200	34/45	1	4
7729-38	Complete	38 x 250	16 x 225	40/50	1	2
7729-41	Complete	42 x 250	20 x 225	45/50	1	2
7729-48	Complete	48 x 250	20 x 225	50/50	–	1
7729-51	Complete	52 x 250	20 x 225	55/50	1	2

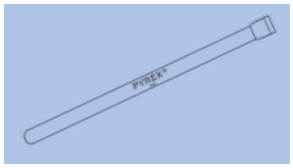
TUBES

6980 PYREX Brand, NMR Tubes, 5 mm Diameter

Precision NMR tubes made from quality PYREX borosilicate glass for compatibility with ground joints, valves, and vacuum racks. Made using precision bore tubing manufacturing techniques proven most reliable in NMR applications. Complete selection of tubes for all types of NMR spectrometers, from 60 to 600 MHz. All 5 mm NMR sample tubes have O.D. = 4.97 +0.000-0.013 mm I.D. of all except basic tubes are 4.20 +0.013-0.000 mm.

Cat. No.	Description	Length (Inches)	For NMR MHz	Concentricity TIR* (Inches)	Camber TIR* (Inches)	Qty/ Pk	Qty/ Cs
6980A-7	Superior Plus	7	400-750	0.0005	0.00025	–	5
6980A-8	Superior Plus	8	400-750	0.0005	0.00035	–	5
6980B-7	Superior	7	300-500	0.0005	0.0005	–	5
6980B-8	Superior	8	300-500	0.0005	0.0006	–	5
6980C-7	Deluxe Plus	7	250-400	0.0010	0.0010	–	5
6980C-8	Deluxe Plus	8	250-400	0.001	0.0011	–	5
6980D-7	Deluxe	7	200-400	0.002	0.0005	–	5
6980D-8	Deluxe	8	200-400	0.002	0.0006	–	5
6980E-7	Regular Plus	7	100-250	0.002	0.0010	5	10
6980E-8	Regular Plus	8	100-250	0.002	0.0011	5	10
6980F-7	Regular	7	60-100	0.002	0.0020	5	10
6980F-8	Regular	8	60-100	0.002	0.0021	5	10
6980G-7	Basic	7	60	0.003	0.0020	5	10
6980G-8	Basic	8	60	0.003	0.0021	5	10

*TIR = Total Indicator Reading

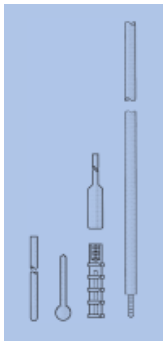


6982 PYREX® Brand, NMR Tubes, 10 mm Diameter

Similar to No. 6980 NMR tubes but with O.D. = 10.00 + 0.000 - 0.013 mm and I.D. = 9.07 ± 0.013 mm, and 7 inches long.

Cat. No.	Description	For NMR MHz	Concentricity TIR* (Inches)	Camber TIR (Inches)	Qty/Cs
6982B-7	Superior	400-600	0.0015	0.0005	5
6982E-7	Regular Plus	200-300	0.002	0.001	5
6982F-7	Regular	60-100	0.003	0.015	5

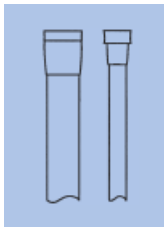
*TIR = Total Indicator Reading



6984 PYREX Brand, NMR, Microcell System

Easy-to-use microsample system works with No. 6980 PYREX 5 mm NMR tubes. Avoid diluting of valuable microsamples. Three configurations in one simple-to-use system.

Cat. No.	Description	Capacity (µL)	Qty/Pk	Qty/Cs
6984-18SB	Spherical Bulb	20	10	20
6984-8C	Capillary	7	10	20
6984-110C	Cylindrical Bulb	105	–	5
6984-TH	Teflon® Holder	–	–	2
6984-PR	Positioning Rod	–	–	5



6989 Caps for NMR Tubes

Replacement caps for No. 6980 and No. 6982 PYREX NMR tubes. Proper method to remove caps is to slice them from the tube. Caps for 5mm tubes come in eight assorted/mixed colors. Packed in bags of 100.

Cat. No.	Description	Bags/Cs	Qty/Cs
6989-5	5 mm NMR Tube Caps	10	1000
6989-10	10 mm NMR Tube Caps	10	1000

7815 PYREX Brand, Bleed, Capillary Tip

For bleeding gases, steam or liquids below the liquid surface of sidearm distillation flasks.

Cat. No.	Approx. O.D. x Length (mm)	Qty/Cs
7815-19	7 x 280	1

*This tube is also a replacement part for organic chemistry kits Cat. Nos. 6949E, 6949G, and 6949K.

7900 PYREX Brand, Digestion, Folin-Wu

Fabricated from specially selected tubing for product durability. Engraved white-filled graduations at 25 and 50 mL.

Cat. No.	Capacity (mL)	Tol.(± mL)	Approx. O.D. x Length (mm)	Qty/Cs
7900-25	50.0	0.4	25 x 200	1

7952 PYREX Brand, Lifetime Red™, Taylor, Universal, Graduated

This tube is for general hospital laboratory work. It was designed by Dr. F.N.L. Taylor, Boston City Hospital, for determinations involving multiple calibrations and for carrying out digestions. Graduated at 12.5, 25, 35, and 50 mL, and supplied with a durable, white enamel marking spot.

Cat. No.	Capacity (mL)	Tol. (± mL)	Approx. O.D. x Length (mm)	Qty/Cs
7952-25	50.0	0.4	25 x 200	1

7995 PYREX® Brand, Hybridization, Screw Cap, Graduated

35mm I.D. tubes available in three standard lengths for use in hybridization incubators with rotators. A more convenient method requiring smaller probe solution volumes. Comes with Corning® standard GL 45 orange plug-seal cap incorporating a silicone O-ring to ensure a leak-resistant seal. The optional Corning vented membrane cap is available for low temperature assays.

Cat. No.	Description	Approx. I.D. x Length (mm)	Qty/Cs
7995-100	Tube, Cap, O-Ring, 100 mm L	35 x 100	2
7995-150	Tube, Cap,O-Ring, 150 mm L	35 x 150	2
7995-300	Tube, Cap, O-Ring, 300 mm L	35 x 300	2
1395-OR	O-Ring, Silicone	–	10
1395-45LTC	Cap for 7995 Tube	–	20

8060 PYREX Brand, Centrifuge, Conical, Beaded Rim

Uniform glass distribution in the wall, taper and bottom provides improved mechanical strength, prevents the formation of failure-causing stress regions during centrifuging and insures the highest degree of accuracy.

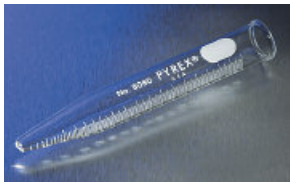
Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
8060-3	3.0	11 x 76	2	12
8060-5	5.0	13 x 101	2	12
8060-15	15.0	17 x 120	2	12
8060-50	50.0	28 x 135	2	12

8061 PYREX Brand, Centrifuge, Conical, Pennyhead Stopper

Uniform glass distribution in the wall, taper and bottom provides improved mechanical strength and prevents the formation of failure-causing stress during centrifuging and insures the highest degree of accuracy. This microcentrifuge tube conforms to ASTM E-237. Tubes are fitted with a No. 9 Pennyhead stopper.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Stopper No.	Qty/Cs
8061-3	3	11 x 90	9	1

For replacement stoppers, see Cat. No. 7660.



8080 PYREX Brand, Centrifuge, Conical, Beaded Rim, Graduated

These tubes have white enamel graduations. The 10 and 15 mL sizes are graduated upward from tip in 0.1 mL divisions. The 50 mL size is graduated upward from tip to 10 mL in 0.5 mL divisions, and from 10 to 50 mL in 1 mL divisions.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
8080-15	15.0	17 x 119	–	12
8080-50	50.0	28 x 135	2	12

8082 PYREX Brand, Centrifuge, Conical, Screw Cap, Graduated

These tubes have white enamel graduations. The 15 mL size is graduated upward from the tip in 0.1 mL divisions. the 50 mL size is graduated upward from tip to 10 mL in 0.5 mL divisions, and from 10 to 50 mL in 1 mL divisions. The phenolic screw cap is fabricated of a resin which is specially formulated to resist the effects of temperature and steam. Caps have a glued-in, white rubber liner.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	G.P.I. Thread Finish	Qty/Cs
8082-15	15.0	17 x 134	15-415	12
8082-50	50.0	28 x 150	24-410	12

For phenolic caps, see Cat. No. 9999.

8084 PYREX® Brand, Centrifuge, Conical, Pennyhead ⅋ Stopper, Graduated

These tubes have white enamel graduations. The 5 and 15 mL sizes are graduated upward from the tip in 0.1 mL divisions. The 50 mL size is graduated upward from tip to 10 mL in 0.5 mL divisions, and from 10 to 50 in 1 mL divisions. The pennyhead stopper is solid.

Cat. No.	Capacity (mL)	⅋ Stopper No.	Approx. O.D. x Length (mm) (Exclusive of Stopper)	Qty/Pk	Qty/Cs
8084-5	5.0	9	13 x 120	1	12
8084-15	15.0	13	17 x 139	–	12
8084-50	50.0	16	28 x 151	1	12

For stopper only, see Cat. No. 7660.

8101 PYREX Brand, Centrifuge, Conical, Beaded Rim, Colored Graduations

These tubes have sharp, colored enamel graduations and markings. The tubes are the same size and shape as our Cat. Nos. 8060 and 8080. They have precision formed tips and uniform walls throughout for a high degree of accuracy and mechanical strength.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8101-15	15.0	17 x 120	12
8101-50	50.0	28 x 135	1

8120 PYREX Brand, Centrifuge, Conical, Heavy Duty, Beaded Rim

Made to the same O.D. and length specifications as No. 8060, but of increased wall thickness for greater mechanical strength. In order to conform with outside diameter and overall length limitations imposed by shields, it has been necessary to reduce the capacity of all heavy duty tubes.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8120-12	12.0	17 x 120	12

8124 PYREX Brand, Centrifuge, Conical, Heavy Duty, Pennyhead Stopper

Uniform glass distribution in the wall, taper and bottom provides improved mechanical strength and prevents the formation of failure causing stress regions during centrifuging. With a solid ⅋ pennyhead stopper.

Cat. No.	Capacity (mL)	⅋ Stopper No.	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
8124-12	12.0	13	17 x 135	1	12
8124-40	40.0	16	28 x 149	1	12

For stopper, see Cat. No. 7660.

8140 PYREX Brand, Centrifuge, Conical, Heavy Duty, Beaded Rim, Graduated

Of heavy wall construction, for greater mechanical strength, with durable, white enamel graduations. The 12 mL size is graduated upward from tip in 0.1 mL divisions. The 40 mL size is graduated in 0.5 mL divisions to 10 mL, and from 10 to 40 mL in 1 mL divisions.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
8140-12	12.0	17 x 120	–	12
8140-40	40.0	28 x 135	6	12

8142 PYREX® Brand, Centrifuge, Conical, Heavy Duty, Screw Cap, Graduated

Constructed of heavy wall glass for greater mechanical strength. Graduations are with durable white enamel. The 10 mL size is graduated upward from tip in 0.1 mL divisions. The 40 mL size is graduated in 0.5 mL divisions to 10 mL, and from 10 to 40 in 1 mL divisions. Tubes are fitted with a phenolic screw cap.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	GPI Thread Finish	Qty/Cs
8142-10	10	17 x 118	15-415	1
8142-40	40	28 x 147	24-400	1

For phenolic cap, see Cat. No. 9999.

8160 PYREX Brand, Centrifuge, Oil, Graduated

In accordance with standard methods of testing for water and sediment in petroleum products. White graduations upward to 0.5 mL in divisions of 0.05 mL; from 0.5 mL to 2 mL in divisions of 0.1 mL; from 2 mL to 3 mL in divisions of 0.2 mL; from 3 mL to 5 mL in divisions of 0.5 mL; from 5 mL to 10 mL in divisions of 1 mL; from 10 mL to 25 mL in divisions of 5 mL and at 50, 75, and 100 mL.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8160-100	100.0	38 x 200	12

Reference: ASTM D-96, D-91, D-893 and D-1796.

8180 PYREX Brand, Lifetime Red™, Centrifuge, Oil, Graduated

In accordance with standard methods of testing for water and sediment in petroleum products. White graduations against a permanent red panel. Graduated upward to 0.5mL in divisions of 0.05 mL; from 0.5 mL to 2 mL in divisions of 0.1 mL; from 2 mL to 3 mL in divisions of 0.2 mL; from 3 mL to 5 mL in divisions of 0.5 mL; from 5 mL to 10 mL in divisions of 1 mL; from 10 mL to 25 mL in divisions of 5mL and at 50, 75, and 100 mL.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8180-100	100.0	38 x 200	12

Reference: ASTM D-96, D-91, D-893, and D-1796.

8190 PYREX Brand, Centrifuge, Oil, Graduated

In accordance with standard methods of testing for water and sediment in petroleum products. With white graduations as listed. Tube is calibrated "to contain" and the subdivisions and capacity tolerances are indicated.

Capacity Cat. No.	(mL)	Range (mL)	Grad. Interval (mL)	From-To	Tolerance (± mL)	Approx. O.D. x Length (mm)	Qty/ Pk	Qty/ Cs
8190-100	100.0	0.0-0.5	0.05	0.0-0.1	0.02	45 x 165	2	12

Reference: ASTM D-96.

8200 PYREX Brand, Centrifuge, Oil, Pear-Shaped, Graduated

For determination of water and sediment in petroleum products. Fabricated from mold-blown blanks to insure uniform shape and greater mechanical strength. The stem has white graduations from 0 to 1.5 mL in 0.1 mL divisions. The body is graduated from 1.5 mL to 5 mL in 0.5mL divisions; from 5 mL to 10 mL in 1 mL divisions; and at 15, 20, 25, 50, and 100 mL.

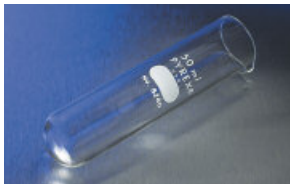
Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8200-100	100.0	58 x 158	12

Reference: ASTM D-96 and D-1966.

8220 PYREX Brand, Centrifuge, Goetz, Pear-Shaped, Graduated

The lower stem is graduated upward to 1 mL in 0.05 mL divisions. The body is graduated from 1 mL to 5 mL in 1 mL divisions; from 5 mL to 50 mL in 5 mL divisions; and from 50 mL to 100 mL in 10 mL divisions.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8220-100	100.0	58 x 159	12



8240 PYREX® Brand, Centrifuge, Round Bottom, Pourout

Round bottom tube with pourout spout for easy decanting.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
8240-50	50.0	29 x 116	–	12
8240-100	100.0	33 x 158	6	12

8300 PYREX Brand, Centrifuge, Short Conical Bottom, Pourout, Graduated

The durable, white enamel scale is graduated from 0 to 10 mL in 0.5 mL divisions, and from 10 mL to 50 mL in 1 mL divisions.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8300-50	50.0	29 x 118	12

8320 PYREX Brand, Centrifuge, Heavy Duty, Short Conical Bottom, Pourout

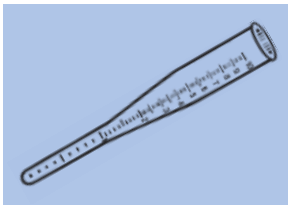
A heavy-walled, short conical bottom tube. With pourout spout for easy decanting.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Cs
8320-40	40.0	29 x 116	12

8340 PYREX Brand, Centrifuge, Heavy Duty, Short Conical Bottom, Pourout, Graduated

Heavy wall construction. Graduated to 10 mL in 0.5 mL divisions, and from 10 to 40 mL in 1 mL divisions. Graduations are in durable white enamel.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
8340-40	40.0	29 x 118	4	12



8360 Kolmer Graduated Centrifuge Tubes, Beaded Rim

These tubes are used in connection with the Wasselman test and to measure H_2O content and potassium ions in oil muds. API RP 13B standard testing method. Graduated in 0.1 mL divisions up to 4 mL, and 0.2 mL divisions from 4 to 10 mL. Graduations are durable white enamel.

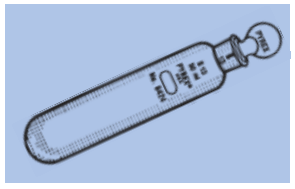
Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qyt/Cs
8360-10	10.0	17 x 125	12

8422 PYREX Brand, Centrifuge, Heavy Duty, Round Bottom, Screw Cap

These tubes are useful for the handling of sputum specimens. Digestion, shaking, neutralizing and centrifuging can be performed in one container. They are also useful for other clinical and micro-biological tests. Screw caps resist the effects of temperature and steam. The 50 mL tube has a black phenolic cap with a glued-in, white rubber liner. The 100mL tube has a white polypropylene cap with a Teflon® liner.

Cat. No.	Approx. Capacity (mL)	Approx. O.D. x Length (mm)	G.P.I. Thread Finish	Qty/Cs
8422-50	50.0	29 x 122	24-410	12
8422-100	100.0	43 x 139	38-400	1

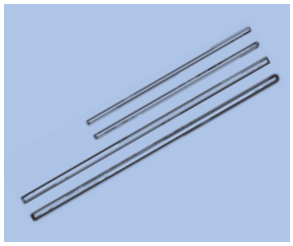
For phenolic cap for 50 mL tube, see Cat. No. 9999.



8424 Round Bottom Centrifuge Tubes, Pennyhead Stoppers

Round bottom, non-graduated centrifuge tube with ⅌ solid glass penny head stopper. Rockefeller Institute of Medical Research type.

Cat. No.	Description	Approx. Capacity (mL)	⅌ Stopper No.	Approx. O.D. x Length (mm)	Qty/Cs
8424-50	Complete	50.0	13	29 x 133	12



9530 PYREX® Brand, Melting Point, Capillary

Made from Code No. 7800 glass. The 100 and 90 mm sizes are available with both ends open or with one end open and one closed. All tubes have a 0.2-0.25 mm wall range.

Cat. No.	Description	Approx. Length (mm)	Wall Range (mm)	Wall Tol. (± mm)	O.D. Range (mm)	I.D. Range (mm)	Approx. Pcs/Vial	Vials/ Cs	Qty/ Cs
9530-1	Open Ends	100	0.20	0.02	1.5-1.8	-	100	20	2000
9530-2	Open Ends	100	0.25	0.03	-	0.8-1.1	100	20	2000
9530-3	1 Open/1 Closed End	90	0.20	0.02	1.5-1.8	-	100	20	2000
9530-4	1 Open/1 Closed End	90	0.25	0.03	-	0.8-1.1	100	20	2000

9540 PYREX Brand, Thiele, Melting Point

For melting point determination tests.

Cat. No.	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
9540-25	25 x 150	2	12

9560 PYREX Brand, Thiele-Dennis, Melting Point

Modified in design to increase the rate of circulation.

Cat. No.	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
9560-25	25 x 165	2	12

9610 PYREX Brand, Weathering Test, Graduated

Graduated upward to 0.5 mL in divisions of 0.05 mL, from 0.5 mL to 3 mL in 0.1 mL divisions, from 3 mL to 5 mL in 0.5 mL divisions and from 5 mL to 100 mL in 1 mL divisions. Made with a 3 mm vent hole located 180° from the front of the tube.For testing propane, butane and isobutane mixtures. Reference: *California Natural Gasoline Association*, Specifications TS-441-3, ASTM D-1837, D-2158.

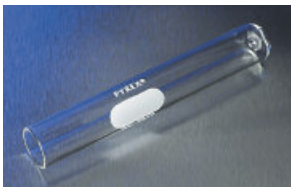
Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	Qty/Cs
9610-100	100	37 x 200	1

9800 PYREX Brand, Test, Beaded Rim

These tubes are made from special tubing to give the optimum wall thickness. They are well annealed, resistant to heat and chemically stable. Rims are fire-polished.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
9800-10	3	10 x 75	72	720
9800-12	5	12 x 75	72	720
9800-13	9	13 x 100	72	720
9800-15	14	15 x 125	72	720
9800-16	20	16 x 150	72	576
9800-18	27	18 x 150	72	576
9800-20	34	20 x 150	72	576
9800-25	55	25 x 150	72	288
9800-25X	70	25 x 200	48	192

9820 PYREX® Brand, Culture, Rimless



Rimless for greater convenience in plugging and rack storage. Walls and bottoms are of uniform thickness. Ends are fire-polished. The 6, 22, and 25 mm O.D. tubes do not have marking spots.

Cat. No.	Capacity (mL)	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
9820-6	0.5	6 x 50	72	720
9820-10	3.0	10 x 75	72	720
9820-12*	5.0	12 x 75	72	720
9820-13**	9.0	13 x 100	72	720
9820-16	11.0	16 x 100	72	576
9820-16X	15.0	16 x 125	72	576
9820-16XX	20.0	16 x 150	72	576
9820-18	27.0	18 x 150	72	576
9820-20	34.0	20 x 150	72	576
9820-22	50.0	22 x 175	72	432
9820-25	55.0	25 x 150	72	288
9820-25X	70.0	25 x 200	48	192

*Kahn tubes.
** Wasserman tube.

9825 PYREX Brand, Culture, Screw Cap

Furnished with deep-form phenolic caps to facilitate handling and sealing after autoclaving. Caps are fabricated from a special formula resistant to the effects of temperature and steam in autoclaving. Caps are provided with a glued-in, white rubber liner. The white enamel marking spot gives an excellent surface for pencil notations. Pencil marks are easily erased.

Cat. No.	Approx. Capacity (mL)	Approx. O.D. x Length (mm)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
9825-13	9.0	13 x 100	13-415	144	288
9825-16	11.0	16 x 100	15-415	144	288
9825-16X	15.0	16x125	15-415	144	288
9825-16XX	20.0	16 x 150	15-415	144	288
9825-20	25.0	20 x 125	18-415	96	192
9825-20X	34.0	20 x 150	18-415	96	192
9825-22	50.0	22 x 175	18-415	48	192
9825-25	55.0	25 x 150	24-410	48	144
9825-25X	70.0	25 x 200	24-410	48	144
9825-38	170.0	38 x 200	38-430M	12	48

For phenolic caps, see Cat. No. 9999.

69825 PYREXPLUS® Brand, Culture, Screw Cap, Protective Coating*

Tube features a protective polymer coating for longer product life and safety. Protective coating helps prevent glass from shattering and reduces spills. Autoclavable (121°C) and resistant to thermal shock. Furnished with deep-form phenolic caps to facilitate handling and sealing. Caps are resistant to autoclaving and feature glued-in, white rubber liners.

Cat. No.	Approx. Capacity (mL)	Approx. O.D. x Length (mm)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
69825-13	9.0	13 x 100	13-415	72	144
69825-16X	15.0	16 x 125	15-415	72	144
69825-20X	34.0	20 x 150	18-415	32	96
69825-25	55.0	25 x 150	24-410	24	48

For phenolic cap only, see Cat. No. 9999.
Do not place over direct heat or flame. Do not heat above 121°C moist heat or 110°C dry heat.
*Covered by U.S. Patent #4940613

9826 PYREX® Brand, Culture, Screw Cap with Teflon® Liner

Similar to No. 9825, but phenolic cap has a PTFE interface firmly bonded to the glued-in rubber liner, providing a sure and highly inert sealing face.

Cat. No.	Approx. O.D. x Length (mm)	Approx. Capacity (mL)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
9826-13	13 x 100	9.0	13-415	144	288
9826-16	16 x 100	11.0	15-415	144	288
9826-16X	16 x 125	15.0	15-415	144	288
9826-16X X	16 x 150	20.0	15-415	144	288
9826-20	20 x 125	25.0	18-415	96	192
9826-20X	20 x 150	34.0	18-415	96	192
9826-25	25 x 150	55.0	24-410	48	144
9826-25X	25 x 200	70.0	24-410	48	144

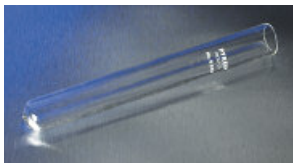
For phenolic caps, see Cat. No. 9998.

9850 PYREX Brand, Culture, Flat Bottom, Rimless

These new culture tubes with flat bottoms are ideal for plant tissue culture and general culture work. The flat bottom facilitates use with agar slants. Walls and bottoms are of uniform thickness. The tubes are rimless for greater convenience in plugging and rack storage. Optional polypropylene two position closure. Position closure open for gas exchange or closed for humidified environment. Internal drip ring minimizes contamination.

Cat. No.	Description	Approx. Capacity (mL)	Approx. Diam. x Length (mm)	Qty/Pk	Qty/Cs
26796-38	Closure*	–	38	50	100
26797-38	Closure	–	38	50	100
9850-25	Tube	39.0	25 x 100	50	100
9850-25X	Tube	47.0	25 x 120	50	100
9850-25XX	Tube	59.0	25 x 150	50	100
9850-40	Tube	130.0	40 x 130	50	100
26794-25	Closure*	–	25	36	72
26795-25	Closure	–	25	36	72
26798-40	Closure	–	40	36	72
26799-40	Closure*	–	40	24	72

*Orange closure.



9860 PYREX Brand, Ignition, Heavy Wall, Rimless

These ignition tubes are made of Code No. 7740 glass and are satisfactory for most applications encountered in school work where temperatures above 600°C are not required. These tubes perform well when continually used at temperatures up to 500°C, or for short periods to 600°C.

Cat. No.	Approx. O.D. x Length (mm)	Qty/Pk	Qty/Cs
9860-14	14 x 100	72	288
9860-16	16 x 125	72	288
9860-18	18 x 150	72	144
9860-20	20 x 150	72	144
9860-25	25 x 200	24	120

FRITTED WARE

32940 PYREX® Brand, Gooch Type, High Form, Fritted Disc

Particularly adapted to analytical work where precipitates are dried to constant weight at 110°C. Also suitable for higher temperatures, in which case it is advisable to heat in an electric furnace. Crucibles should not be subject to sudden temperature changes. In order to avoid strain, they should not be removed from the furnace until the temperature has dropped to 250°C. For low form, see Cat. No. 32960.

Cat. No.	Capacity (mL) and Porosity	Diam. of Disc (mm)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
32940-30C	30C	30	35 x 60	–	12
32940-30M	30M	30	35 x 60	–	12
32940-30F	30F	30	35 x 60	3	12
32940-50C	50C	40	45 x 60	–	9
32940-50M	50M	40	45 x 60	–	9
32940-50F	50F	40	45 x 60	–	1

For filter tube only, see Cat. No. 9480.

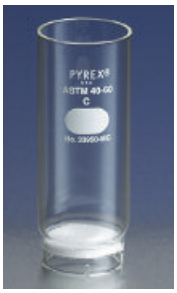
32960 PYREX Brand, Gooch Type, Low Form, Fritted Disc

Particularly adapted to analytical work where precipitates are dried to constant weight at 110°C. Also suitable for higher temperatures, in which case it is advisable to heat in an electric furnace. Crucibles should not be subjected to sudden temperature changes. In order to avoid strain, they should not be removed from the furnace until the temperature has dropped to 250°C. For high form, see Cat. No. 32940.

Cat. No.	Capacity (mL) and Porosity	Diam. of Disc (mm)	Approx. O.D. x Height (mm)	Qty/Pk	Qty/Cs
32960-15C	15C	20	30 x 44	–	1
32960-15M	15M	20	30 x 44	–	1
32960-30C	30C	30	41 x 50	3	12
32960-30M	30M	30	41 x 50	–	12
32960-30F	30F	30	41 x 50	3	12

For filter tube only, see Cat. No. 9480.

33950 PYREX Brand, Fritted Disc



Designed for use in PYREX brand extractors, where it is desirable to weigh the material extracted or where paper thimbles may be attacked by the chemicals used. For PYREX brand extractors and extraction apparatus, see Cat. Nos. 3740 through 3880.

Cat. No.	Approx. Body Diam. (mm)	Approx. Overall Height (mm)	Qty/Pk	Qty/Cs
33950-SC	25	85	1	9
33950-MEC	35	90	–	1
33950-MC	35	90	1	6
33950-LEC	45	130	–	1
33950-LC	45	130	1	6

33990 PYREX® Brand, Morton, Bacteria, Fritted Disc

Designed by Dr. H.E. Morton of the University of Pennsylvania, this convenient glass bacteria-filtering assembly with an ultra-fine fritted disc eliminates the need for rubber stoppers and the usual difficulties encountered when sterilizing rubber. Contamination-free solutions are obtained as a result of the following design features:

- The 10 mm sidearm on the apparatus permits the insertion of a plug.
- A recess at the bottom of the outer ground joint also allows a plug.
- The inverted ⧩ 29/26 ground joint provides further assurance of sterile solutions since nonsterile solutions are prevented from entering the flask when disassembling the unit. The unit will withstand the repeated sterilizations usually employed in laboratories.

Cat. No.	Description	Capacity (mL)	Dia. of Disc (mm)	Approx. Overall Height (mm)	Qty/Cs
33990-250	Complete	250	40	282	1

39525 PYREX Brand, Gas Dispersion, Fritted Disc

These tubes, with a fritted disc at an angle of 90°, are used to disperse or scrub gas in liquids. The size of gas bubbles depends upon the porosity of the fritted disc and the liquid used. The finer porosity discs give smaller bubbles; however, greater gas pressure is required. The approximate overall dimension across the disc and stem is 35 mm for a 20 mm disc and 45 mm for a 30 mm disc.

Cat. No.	Diam. of Disc (mm) and Porosity	Approx. Length (mm)	Qty/Cs
39525-20C	20 C	250	1
39525-30C	30 C	250	1

39530 PYREX Brand, Gas Dispersion, Vertical Type, Fritted Disc

Tube has a fritted disc at an angle of approximately 15°. This permits the small gas bubbles to rise from the disc surface without excessive formation of large bubbles. Its performance is comparable to that of a horizontal disc. These tubes can be used in test tubes or flasks since a large opening is not required.

Cat. No.	Diam. of Disc (mm) and Porosity	Approx. Length (mm)	Dia. of Stem (mm)	Qty/Cs
39530-20C	20 C	250	6	1
39530-30C	30 C	250	6	1
39530-40C	40 C	250	8	1

39533 PYREX Brand, Gas Dispersion, Fritted Cylinder

Tube is used to disperse or scrub gas in liquids. The size of gas bubbles depends upon the porosity of the fritted disc and the liquid used. The finer porosity discs give smaller bubbles. However, greater gas pressure is required. The 12 mm. O.D. fritted cylinder permits insertion through small openings.

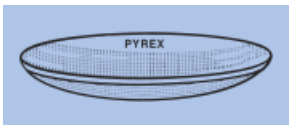
Cat. No.	Diam. of Disc (mm) and Porosity	Approx. Length (mm)	Dia. of Stem (mm)	Qty/Cs
39533-12C	12 C	250	8	6
39533-12EC	12 EC	250	8	6

39534 PYREX® Brand, Gas Dispersion, Horizontal Type, Fritted Disc

Tube is used to disperse or scrub gas in liquids. The size of gas bubbles depends upon the porosity of the fritted disc and the liquid used. The finer porosity discs give smaller bubbles, however greater gas pressure is required. Centrally located stem permits insertion through small openings.

Cat. No.	Diam. of Disc (mm) and Porosity	Approx. Length (mm)	Dia. of Stem (mm)	Qty/Cs
39534-30C	30 C	250	6	1
39534-30EC	30 EC	250	6	1

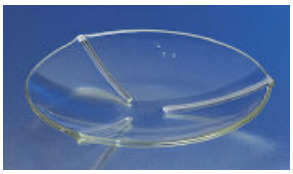
WATCH GLASS



9985 PYREX Brand, Watch Glass

These watch glasses possess high chemical durability, thus preventing contamination of solutions. They are molded to the same radius of curvature for convenient stacking. The heavy wall and uniform fire-polished edge provide mechanical strength. The outside diameter cannot be controlled within close limits and a slight degree of out-of-round can be expected to occur.

Cat. No.	Diam. Size (mm)	Fits Beaker Size (mL)	Qty/Pk	Qty/Cs
9985-65	65	150	12	144
9985-75	75	250	12	72
9985-90	90	400	12	72
9985-100	100	600	12	144
9985-125	125	1000	12	144
9985-150	150	2000	12	144



9990 PYREX Brand, Ribbed Watch Glass/Beaker Cover

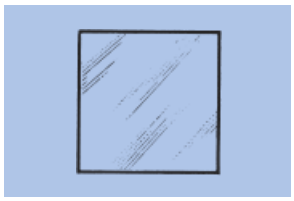
Designed for use as a beaker cover. Ribs are molded into the glass so that they can't pop off as they do when cane is sealed to standard watch glasses. Permits reflux of digestate and escape of excess vapor. Eliminates risk of contamination from dropped hooks or props. Meets EPA requirements for methods 3005, 3010, and 3020.

Cat. No.	Description	Fits Beaker Size (mL)	Dia. (mm)	Qty/Cs
9990-75	Ribbed	250	75	12
9990-100	Ribbed	600	100	12
9990-125	Ribbed	1000	125	12

Disposable Glass

COVER GLASS

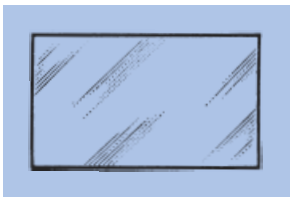
Corning's special, optically clear, water-white cover glass is resistant to surface attach or weathering and will remain clear for extended periods of time. Packed one ounce per pack and 10 packs per case.



2865 CORNING® Brand, No. 1, Squares

The thickness of No. 1 squares is 0.12 to 0.16 mm.

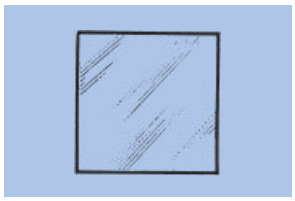
Cat. No.	Approx. Size (mm)	Approx. Pcs/Oz	Qty/Cs
2865-18	18 x 18	240	10 oz
2865-22	22 x 22	160	10 oz
2865-25	25 x 25	124	10 oz



2935 CORNING Brand, No. 1, Rectangles

The thickness of No. 1 rectangles is 0.12 to 0.16 mm.

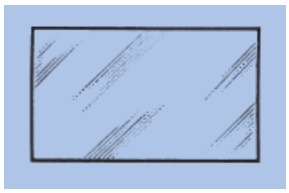
Cat. No.	Approx . Size (mm)	Approx. Pcs/Oz	Qty/Cs
2935-223	22 x 30	118	10 oz
2935-224	22 x 40	88	10 oz
2935-225	22 x 50	72	10 oz
2935-243	24 x 30	108	10 oz
2935-244	24 x 40	81	10 oz
2935-245	24 x 50	65	10 oz
2935-246	24 x 60	54	10 oz



2870 CORNING Brand, No. 1½, Squares

The thickness of No. 1½ squares is 0.16 to 0.19 mm.

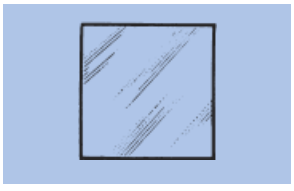
Cat. No.	Approx. Size (mm)	Approx. Pcs/Oz	Qty/Cs
2870-18	18 x 18	198	10 oz
2870-22	22 x 22	135	10 oz
2870-25	25 x 25	102	10 oz



2940 CORNING Brand, No. 1½, Rectangles

The thickness of No. 1½ rectangles is 0.16 to 0.19 mm.

Cat. No.	Approx. Size (mm)	Approx. Pcs/Oz	Qty/Cs
2940-223	22 x 30	97	10 oz
2940-224	22 x 40	73	10 oz
2940-225	22 x 50	58	10 oz
2940-243	24 x 30	89	10 oz
2940-244	24 x 40	67	10 oz
2940-245	24 x 50	54	10 oz
2940-246	24 x 60	45	10 oz

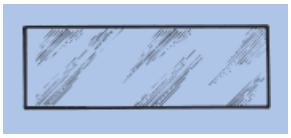


2875 CORNING Brand, No. 2, Squares

The thickness of No. 2 squares is 0.19 to 0.25 mm.

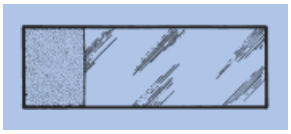
Cat. No.	Approx . Size (mm)	Approx. Pcs/Oz	Qty/Cs
2875-18	18 x 18	159	10 oz
2875-22	22 x 22	106	10 oz
2875-25	25 x 25	82	10 oz

MICROSCOPE SLIDES



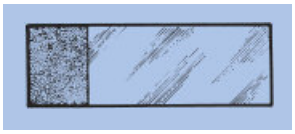
2947 CORNING® Brand, Plain

Cat. No.	Approx. Size (mm)	Thickness (mm)	Qty/Pk	Qty/Cs
2947-3x1	3" x 1"	0.90-1.10	½ GR	10 GR
2947-75x25	75 x 25	0.90-1.10	½ GR	10 GR
2947-75x38	75 x 38	0.90-1.10	½ GR	5 GR
2947-75x50	75 x 50	0.90-1.10	½ GR	5 GR



2948 CORNING Brand, Frosted One Side, One End

Cat. No.	Approx. Size (mm)	Thickness (mm)	Qty/Pk	Qty/Cs
2948-3x1	3" x 1"	0.90-1.10	½ GR	10 GR
2948-75x25	75 x 25	0.90-1.10	½ GR	10 GR

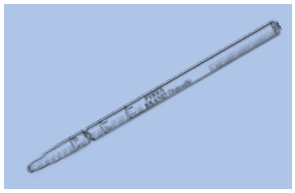


2949 CORNING Brand, Frosted Two Sides, One End

Cat. No.	Approx. Size (mm)	Thickness (mm)	Qty/Pk	Qty/Cs
2949-75x25	75 x 25	0.90-1.10	½ GR	10 GR

PIPETS

7058 PYREX® Disposable Glass Bacteriological Pipets, Multi-Pack, Sterile, Plugged, Graduated



These pipets meet the requirements recommended by the American Public Health Association as shown in "Standard Methods for the Examination of Dairy Products." This pipet is very convenient when duplicate platings are to be made on the same medium or for plating differential medium for the determination of gram-negative bacteria, mold and yeast, or total plate count. Both sizes are designed for gravity feed (blow-out is not required). These cotton-plugged pipets are packaged in sterile bags. This allows the use of several pipets at a time without contamination of the entire case. New I.S.O. color-coding is printed directly on the tear strip for easy identification by size.

Cat. No.	Capacity (mL)	Pcs/Bag	Bags/Pk	Qty/Cs	Pk/Cs
7058-1X	1.1	25	10	500	2
7058-2X	2.2	25	10	500	2

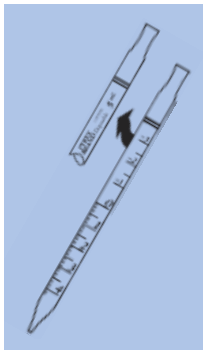
7077 PYREX Brand, Disposable Glass Serological, Individually Wrapped, Sterile, Plugged

These pipets, calibrated "to deliver" with blow-out, offer long, slender, tapered tips to make pipetting go faster and easier. All pipets have negative graduations and fire-polished tips for burr-free, even flow rates. Easy-open Steri-View™ wrappers (one side paper, one side plastic) have color-coded sizes printed directly on the paper for easy identification by size. Colors conform to I.S.O. standards. Reference: ASTM E-714.

Cat. No.	Capacity (mL)	Negative Grad. (mL)	Grad. Interval (mL)	Total Length (mm)	Qty/Pk	Pk/Cs	Qty/Cs
7077-1N	1.0	0.2	.01	290	200	4	800
7077-2N	2.0	0.2	.01	290	180	4	720
7077-5N	5.0	1.0	.1	290	120	6	720
7077-10N	10.0	2.0	.1	290	100	6	600

Do not pipet by mouth. We suggest using a mechanical pipetting device.

7077B PYREX® Brand, Disposable Glass Serological, Shorty, Individually Wrapped, Sterile, Plugged



These shorty pipets, calibrated "to deliver" with blow-out, are ideal for use in confined areas. The 5, 10, and 25 mL sizes have tooled tops and the 50 mL has a polypropylene top end. Negative graduations on each pipet make it applicable for both serological and measuring procedures. I.S.O. color coding is printed directly on the Steri-View wrapper.

Cat. No.	Capacity (mL)	Neg. Grad. (mL)	Grad. Interval (mL)	Total Length (mm)	Qty/Pk	Pk/Cs	Qty/Cs
7077B-1	1.0	0.5	.01	215	250	2	500
7077B-5	5.0	3.0	.1	215	200	2	400
7077B-10	10.0	4.0	.2	215	200	2	400
7077B-25	25.0	5.0	.2	300	100	4	400
7077B-50*	50.0	3.0	.5	358	25	2	50

Do not pipet by mouth. We suggest using a mechanical pipetting device.
*50 mL size features negative and reverse graduations.

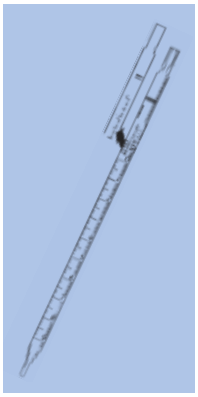
7078 PYREX Brand, Disposable Glass Serological, Multi-Pack, Sterile, Plugged

Designed for the larger-volume user, these pipets are calibrated "to deliver" with blow-out, and are packed to permit easy access to several pipets at a time without contaminating the entire case. Similar to Cat. No. 7077, except multi-packed in plastic bags. New I.S.O. color-coding is printed directly on the tear strip for easy identification by size. Reference: ASTM E-714.

Cat. No.	Capacity (mL)	Negative Grad. (mL)	Grad. Interval (mL)	Total Length (mm)	Qty/ Bag	Bags/ Pk	Pk/ Cs	Qty/ Cs
7078-5X	0.5	0.2	.01	215	25	10	2	500
7078-1N	1.0	0.2	.1	290	50	5	4	1000
7078-1CN	1.0	0.2	.01	290	50	5	4	1000
7078-2N	2.0	0.2	.01	290	35	5	4	700
7078-5N	5.0	1.0	.1	290	30	8	4	960
7078-10N	10.0	2.0	.1	290	20	6	6	720

Do not pipet by mouth. We suggest using a mechanical pipetting device.

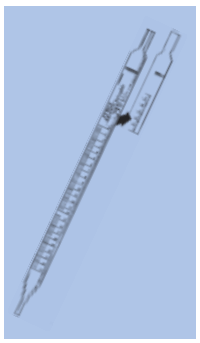
7078A PYREX Brand Disposable Glass Serological Pipets, Wide-Tip, Multi-Pack, Sterile, Plugged



These sterile disposable wide orifice glass pipets are calibrated "to deliver" (TD) with blow-out, and are used when testing viscous liquids or suspensions. Designed with wider tips than standard pipets, they are easier to fill and discharge when ground-up particulate matter is used for microbiological tests. They are ideal for transferring agar, emulsifying or antifoaming agents, thycelial and fermentation broths. They are packaged in plastic bags, so several can be used at a time without contaminating the entire pack. New I.S.O. color coding is printed directly on the tear strip for easy identification by size.

Cat. No.	Capacity (mL)	Negative Grad. (mL)	Grad. Interval (mL)	Pieces/ Bag	Bags /Pk	Qty/Cs	Pk/Cs
7078A-5	5.0	1.0	.1	25	8	400	2
7078A-10	10.0	2.0	.1	20	10	400	2

7078B PYREX® Brand, Disposable Glass Serological, Shorty, Multi-Pack, Sterile, Plugged



These shorty pipets, calibrated "to deliver" with blow-out, are ideal for use in confined areas. The 5, 10, and 25 mL sizes have tooled tops and the 50 mL has a polypropylene top end. Negative graduations on each pipet make it applicable for both serological and measuring procedures. Packaged in plastic bags so several can be removed without contaminating the entire pack. I.S.O. color-coding is printed directly on the tear strip.

Cat. No.	Capacity (mL)	Negative Grad. (mL)	Grad. Interval (mL)	Total Length (mm)	Qty/ Bag	Bags/ Pk	Pk/Cs	Qty/Cs
7078B-1	1.0	0.5	.01	215	10	25	2	500
7078B-5	5.0	3.0	.1	215	10	20	2	400
7078B-10	10.0	4.0	.2	215	10	20	2	400
7078B-25	25.0	5.0	.2	300	5	20	4	400
7078B-50*	50.0	3.0	.5	358	5	–	10	50

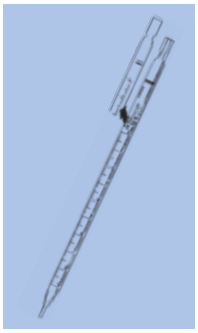
Do not pipet by mouth. We suggest using a mechanical pipetting device.
*50 mL size features negative and reverse graduations.

7078D PYREX Brand Disposable Glass Serological Pipets, Flip-Top Canister Pack, Sterile, Plugged

These pipets are calibrated "to deliver" (TD) with blow-out. They are packed in a flip-top canister to keep the pipets racked. These pipet canisters come sealed in polyethylene bags for sterility. New I.S.O. color-coding is printed directly on the tear strip for easy identification by size. Reference: ASTM E-714.

Cat. No.	Capacity (mL)	Negative Grad. (mL)	Grad. Interval (mL)	Pcs/Canister	Qty/Cs	Pk/Cs
7078D-1	1.0	0.2	.01	50	500	10
7078D-5	5.0	1.0	.1	25	400	16
7078D-10	10.0	2.0	.1	25	400	16

7079 PYREX Brand Disposable Glass Serological Pipets, Bulk Pack, Nonsterile, Unplugged



These disposable PYREX glass pipets are calibrated "to deliver" (TD) with blow-out and offer long, slender, tapered tips to make pipetting go faster and easier. All pipets have negative graduations and fire polished tips for burr-free, even flow rates. Nonsterile, unplugged and bulk packed. Reference: ASTM E-714.

Cat. No.	Capacity (mL)	Negative Grad. (mL)	Grad. Interval (mL)	Pieces/ Bag	Bags/Pk	Qty/Cs	Pk/Cs
7079-5X	0.5	0.2	.01	125	1	500	2
7079-1N	1.0	0.2	.01	50	5	1000	4
7079-2N	2.0	0.2	.01	35	5	700	4
7079-5N	5.0	1.0	.1	30	8	960	4
7079-10N	10.0	2.0	.1	20	6	720	6

7095B & 7095D CORNING® Brand, Bulk Pack, Non-Sterile, Non-Plugged

Corning disposable glass Pasteur pipets are available in convenient Packages. One-time use eliminates the danger of cross-contamination of valuable specimens or laboratory reagents. These pipets feature a constriction one inch below the top to facilitate plugging. They are ideal for rapid non-volumetric transfer work in bacteriology, immunology, hematology and serology studies, as well as blood bank and clinical chemistry procedures.

Cat. No.	Size (Inches)	Qty/Pk	Qty/Cs
7095B-5X	5.75	5	1000
7095B-9	9	5	1000
7095B-NMR	Long Tip	–	100
7095D-5X	5.75	5	1000
7095D-9	9	5	1000

"B" series pipets are soda lime glass. "D" series are borosilicate glass.

TUBES, CULTURE

99445 PYREX® Brand, Culture, Disposable, Rimless, Dispenser Pack and Bulk Pack

These one-use culture tubes are packaged for your convenience in easy-to-open, easy-to-use packs. The three small sizes come in a dispenser arrangement, and the larger sizes are bulk-packed. Made of borosilicate glass to reduce pH changes and contaminants potentially leached from soda-lime glass.

Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	Qty/Pk	Qty/Cs
99445-10	4.0	10 x 75	250	1000
99445-12	6.0	12 x 75	250	1000
99445-13	10.0	13 x 100	250	1000
99445-15	11.0	15 x 85	250	1000
99445-16	15.0	16 x 100	250	1000
99445-16X	19.0	16 x 125	250	1000
99445-16XX	23.0	16 x 150	250	1000
99445-18	28.5	18 x 150	250	500
99445-20	36.0	20 x 150	250	500

99447 PYREX Brand, Culture, Disposable, Round Bottom, White Marking Spot, Screw Cap Style, Bulk Pack

Designed for both tissue culture and general bacteriological work. Tubes are made of borosilicate glass and are sold without caps.

Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
99447-13	7.5	13 x 100	13-415	250	1000
99447-16	15.5	16 x 125	15-415	250	1000
99447-16X	19.0	16 x 150	15-415	250	1000
99447-161	11.5	16 x 100	15-415	250	1000
99447-20	24.0	20 x 150	18-415	250	500
99447-20X	30.0	20 x 150	18-415	250	500

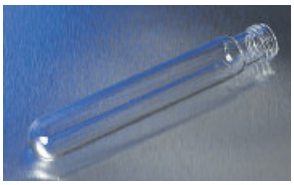
For caps, see Cat. No. 99999.

99448 PYREX Brand, Culture, Disposable, Flat Bottom, Screw Cap Style, Bulk Pack

Tube has flat bottom and comes without marking spot. Tubes are made of borosilicate glass and are sold without caps.

Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
99448-16	17.0	16 x 125	15-415	250	1000
99448-16X	11.5	16 x 100	15-415	250	1000
99448-19	29.5	19.5 x 145	18-415	250	500

For caps, see Cat. No. 99999.



99449 PYREX Brand, Culture, Disposable, Round Bottom, Screw Cap Style, Bulk Pack

A round bottom tube without marking spot. Tubes are made of borosilicate glass and are sold without caps.

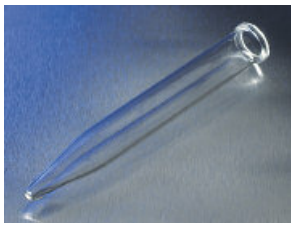
Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	G.P.I. Thread Finish	Qty/Pk	Qty/Cs
99449-13	7.5	13 x 100	13-415	250	1000
99449-16	11.5	16 x 100	15-415	250	1000
99449-16X	15.0	16 x 125	15-415	250	1000
99449-16XX	19.0	16x150	15-415	250	1000
99449-20	24.0	20 x 125	18-415	250	500
99449-20X	30.0	20 x 150	18-415	250	500

For caps, see Cat. No. 99999.

TUBES, CENTRIFUGE

These tubes feature more consistent uniform wall thickness, a well formed conical tapered tip and durable tip radius. The tubes are designed to withstand centrifugation up to 3,000 RCF.

99501 PYREX® Brand, Centrifuge, Disposable Glass, Ungraduated, Snap Cap



Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	Cap Style	Snap Cap	Qty/ Cs
99501-5	5	13 x 110	Snap Cap Closure	99500-1	125
99501-10	10	16 x 114	Snap Cap Closure	99500-2	125
99501-15	15	17 x 126	Snap Cap Closure	99500-2	125
99501-50	50	29 x 137	Tooled Rim	N/A	72

Snap caps are sold separately. Product is supplied nonsterile.

99502 PYREX Brand, Centrifuge, Disposable Glass, Ungraduated, Screw Cap Closure

Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	Thread Finish	Cap Style	Screw Cap	Qty/ Cs
99502-5	5	13 x 110	13-415	Screw Cap Closure	9998-13 99999-13	125
99502-10	10	16 x 114	15-415	Screw Cap Closure	9998-15 99999-15	125
99502-15	15	17 x 126	15-415	Screw Cap Closure	9998-15 99999-15	125
99502-50	50	29 x 137	24-400	Screw Cap Closure	9999-24 –	72

Screw caps are sold separately. Product is supplied nonsterile.

CAPS

99500 CORNING® Brand, Snap Cap, Polyethylene, Orange

Corning orange polyethylene snap caps are manufactured to rigorous standards to ensure a leak proof seal.

Cat. No.	Description	Qty/Cs
99500-1	Fits 5mL Tube	500
99500-2	Fits 10mL and 15mL Tube	500

99999 CORNING Brand, Phenolic, Disposable, Bulk Pack

Made of a phenolic compound. These caps have a white rubber liner.

Cat. No.	G.P.I. Thread Finish	Outside Height	Qty/Cs
99999-13	13-415	13.5	1000
99999-15	15-415	16.0	1000
99999-18	18-415	17.5	1000

PYREX® VISTA™ Glassware

70000 PYREX VISTA Standard Low Griffin Beakers

These PYREX VISTA standard Griffin Beakers with spout, manufactured to provide balance between thermal shock resistance and mechanical strength. For convenience, the 250 through 1000 mL beakers have a double graduated metric scale to indicate approximate content. All sizes have blue graduations and an extra large blue marking spot. The 10 mL size is not graduated. The beakers are designed to ASTM E-960.

Cat. No.	Capacity (mL)	Qty/Cs	Pk/Cs
70000-10	10	24	2
70000-20	20	24	2
70000-30	30	24	2
70000-50	50	24	2
70000-100	100	24	2
70000-150	150	24	2
70000-250	250	24	2
70000-400	400	24	2
70000-600	600	12	2
70000-1L	1000	12	2

70022 PYREX VISTA Cylinders, Single Metric Scale, Class A, To Contain

These PYREX VISTA Class A graduated cylinders are calibrated to contain (TC) and have blue enamel graduations. The cylinder capacity is in accordance with ASTM E-1272. The 10 mL size has a funnel top. For bumper guard only, See Cat. No. 3066.

Cat. No.	Capacity (mL)	Qty/Cs	Pk/Cs
70022-10	10	24	24
70022-25	25	18	18
70022-50	50	18	18
70022-100	100	12	12
70022-250	250	12	12
70022-500	500	8	8

70024 PYREX VISTA Cylinders, Single Metric Scale, Class A, To Deliver

These PYREX VISTA Class A graduated cylinders are calibrated to deliver (TD) and have blue enamel graduations. The cylinder capacity is in accordance with ASTM E-1272. The 10 mL size has a funnel top for easier filling.

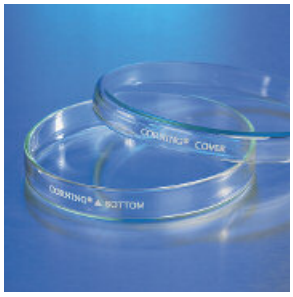
Cat. No.	Capacity (mL)	Qty/Cs	Pk/Cs
70024-10	10	24	24
70024-25	25	18	18
70024-50	50	18	18
70024-100	100	12	12
70024-250	250	12	12
70024-500	500	8	8

70075 PYREX® VISTA™ Cylinder, Plastic Base with Blue Graduations, To Contain, Economy

These PYREX VISTA cylinders are calibrated “to contain” (TC). They are supplied in two parts – a strong, accurate glass graduate and a detachable, sturdy plastic base which absorbs impacts and reduces breakage. Tolerances are ±5% of total at any point. By removing the base, the graduate can be conveniently stacked. Bumper guards are supplied with 2 5mL through 100 mL inclusive. The 10 mL has a funnel top for careful pouring. read. Snap caps are supplied with all sizes.

Cat. No.	Capacity (mL)	QtyPk
70075-10	10	12
70075-25	25	12
70075-50	50	12
70075-100	100	12

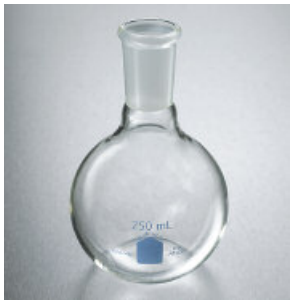
70165 CORNING® Soda Lime Petri Culture Dishes



These flat, clear Corning dishes are made from soda lime silica glass and will withstand repeated sterilization (wet or dry). The edges are beaded to provide greater mechanical strength. The bead also provides a means to equally space the side walls of the bottom and cover, thereby reducing the capillary action of the condensed moisture on the sides. They are not affected chemically or thermally by any of the methods commonly employed in laboratories where sterilization is routinely used. The covered dish is not airtight. Bottoms also have a triangular enamel reference point for serial dilutions.

Cat. No.	Size (mm)	Qty/Cs	Pk/Cs
70165-60	60 x 15	24	2
70165-100	100 x 10	24	2
70165-101	100 x 15	24	2
70165-102	100 x 20	24	2
70165-152	150 x 20	24	2

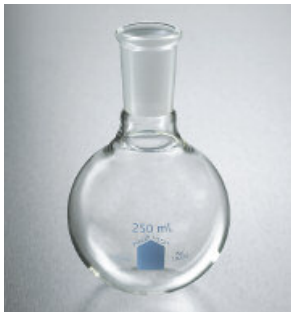
70100 PYREX VISTA Flat Bottom Boiling Flask, Short Neck



These PYREX VISTA flat bottom boiling flasks have full length outer 24/40 ⧩ joints, but with shorter necks. Wall thicknesses are controlled to provide balance between thermal expansion and mechanical strength for greater shock resistance. The flat bottom boiling flasks are designed to ASTM E-1403. Adapter Cat. Nos. 8800, 8820 and 8825 are used to connect flasks with different size joints, thus allowing numerous combinations for diverse assemblies.

Cat. No.	Capacity (mL)	⧩ Joint Size	Qty/Cs	Pk/Cs
70100-125	125	24/40	12	-
70100-250	250	24/40	12	2
70100-500	500	24/40	12	2
70100-1L	1000	24/40	2	2

70320 PYREX VISTA Round Bottom Boiling Flasks, Short Neck



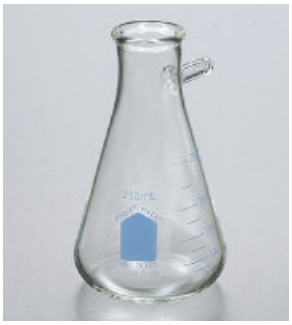
These PYREX VISTA round bottom boiling flasks have full length outer ⧩ joints, but with shorter necks. They are manufactured from No. 7740 borosilicate glass. Wall thicknesses are controlled to provide balance between thermal expansion and mechanical strength for greater shock resistance. The round bottom boiling flasks are designed to ASTM E-1403. Adapter Nos. 8800, 8820 and 8825 are used to connect flasks with different size joints, thus allowing numerous combinations for diverse assemblies.

Cat. No.	Capacity (mL)	⧩ Joint Size	Qty/Cs	Pk/Cs
70320A-50	50	19/38	4	2
70320-100	100	24/40	4	2
70320-250	250	24/40	4	2
70320-500	500	24/40	4	2
70320-1L	1000	24/40	2	2
70320-2L	2000	24/40	2	2

70980 PYREX® VISTA™ Narrow Mouth Erlenmeyer Flasks

These narrow mouth PYREX VISTA Erlenmeyer flasks have uniform wall thickness which provide the proper balance between mechanical strength and thermal shock resistance. Approximate graduations are in durable blue enamel. An extra large blue marking space is also provided. The Erlenmeyer flasks are designed to ASTM E-1404 Type 1.

Cat. No.	Capacity (mL)	Qty/Cs	Pk/Cs
70980-25	25	24	2
70980-50	50	24	2
70980-125	125	24	2
70980-250	250	24	2
70980-500	500	12	2
70980-1L	1000	12	2



70340 PYREX VISTA Filtering Flask

These PYREX VISTA filtering flasks have sidearm tubulations and have blue gradations to show approximate capacity. The neck finish affords a fit for rubber stoppers. Tubulation O.D. on sizes up to 1000 mL is 10 mm. The filtering flasks are designed to ASTM E-1406 Type 2.

Cat. No.	Capacity (mL)	Qty/Cs	Pk/Cs
70340-250	250	12	2
70340-500	500	12	2
70340-1L	1000	12	2

70360 PYREX VISTA Micro Filtering Flask, with Tubulation

These PYREX VISTA small filtering flasks are recommended for microchemical use. All flasks have permanent blue enamel marking spots. The filtering flasks are designed to ASTM E-1406 Type 2.

Cat. No.	Capacity (mL)	Qty/Cs	Pk/Cs
70360-25	25	12	2
70360-50	50	12	2
70360-125	125	12	2

70640 PYREX VISTA Volumetric Flasks, Class A, Glass ⅋ Stopper

These PYREX VISTA volumetric flasks provide precise volume measurement. The necks are tooled for ⅋ glass stoppers. The graduation line is sharp and permanent and large blue block letters make the inscription easy to read. These Class A volumetric flasks have been manufactured to Class A tolerances as established by ASTM E-694 for volumetric ware, ASTM E-542 for calibration of volumetric ware and ASTM E-288 for volumetric flasks.

Cat. No.	Capacity (mL)	Stopper	Qty/Cs	Pk/Cs
70640-10	10	9	12	-
70640-25	25	9	12	2
70640-50	50	9	12	2
70640-100	100	13	12	2
70640-200	200	13	12	2
70640-250	250	16	12	2
70640-500	500	16	12	2
70640-1L	1000	20	2	2
70640-2L	2000	27	2	2

70581 PYREX® VISTA™ Volumetric Flasks, Class B, Polyethylene Snap-Cap

These PYREX VISTA Class B volumetric flasks have capacity tolerances are twice those specified for Class A volumetric ware. The graduation line is sharp and permanent; large blue block letters make inscriptions easy to read. Snap-caps are supplied with all sizes.

Cat. No.	Capacity (mL)	Qty/Cs	Pk/Cs
70581-10	10	12	-
70581-25	25	12	2
70581-50	50	12	2
70581-100	100	12	2
70581-250	250	12	2
70581-500	500	6	1
70581-1L	1000	4	1
70581-2L	2000	4	1

70710 PYREX VISTA Volumetric Pipets, Class A, Reusable

These PYREX VISTA volumetric pipets are manufactured to Class A capacity tolerances as indicated by ASTM E-969. Sizes 1 mL through 10 mL are color-coded.

Cat. No.	Capacity (mL)	Color Code	Qty/Cs	Pk/Cs
70710-1	1	Blue	12	-
70710-2	2	Orange	12	-
70710-5	5	White	12	-
70710-10	10	Red	12	-

70800 PYREX VISTA Test Tubes, Beaded Rim

These PYREX VISTA test tubes are annealed, resistant to heat and chemically stable. Rims are fire-polished. The 25 mm diameter tubes do not have a marking spot.

Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	Qty/Cs	Pk/Cs
70800-10	3	10 x 75 mm	200	4
70800-12	5	12 x 75 mm	200	4
70800-13	9	13 x 100 mm	200	4
70800-15	14	15 x 125 mm	200	4
70800-16	20	16 x 150 mm	200	4
70800-18	27	18 x 150 mm	200	4
70800-20	34	20 x 150 mm	200	4
70800-25	55	25 x 150 mm	200	4
70800-25X	70	25 x 200 mm	200	4

70820 PYREX® VISTA™ Rimless Culture Tubes

These reusable PYREX VISTA rimless culture tubes offer greater convenience in plugging and rack storage. Ends are fire-polished. The 22 and 25 mm O.D. tubes do not have blue marking spots.

Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	Qty/Cs	Pk/Cs
70820-6	0.5	6 x 50 mm	200	4
70820-10	3	10 x 75 mm	200	4
70820-12	5	12 x 75 mm	200	4
70820-13	9	13 x 100 mm	200	4
70820-16	11	16 x 100 mm	200	4
70820-16X	15	16 x 125 mm	200	4
70820-16XX	20	16 x 150 mm	200	4
70820-18	27	18 x 150 mm	200	4
70820-20	34	20 x 150 mm	200	4
70820-22	50	22 x 150 mm	200	4
70820-25	55	25 x 150 mm	200	4
70820-25X	70	25 x 200 mm	200	4

70825 PYREX VISTA Screw Cap Culture Tubes, Phenolic Caps

These PYREX VISTA culture tubes are supplied with deep-form phenolic caps with a rubber liner to facilitate handling and sealing after autoclaving. The blue enamel marking spot gives an excellent surface for pencil notations. Pencil marks are easily erased. For replacement phenolic caps, see Cat. No. 9999.

Cat. No.	Approx. Volume (mL)	O.D. x Length (mm)	Qty/Cs	Pk/Cs
70825-13	9	13 x 100	200	4
70825-16	11	16 x 100	200	4
70825-16X	15	16 x 125	200	4
70825-16XX	20	16 x 150	200	4
70825-20	25	20 x 125	200	4
70825-20X	34	20 x 150	200	4
70825-25	55	25 x 150	200	4

DIGITAL HOT PLATES, STIRRERS, AND STIRRING HOT PLATES

The new Corning® digital hot plates and stirrers are made with the same durability and quality Corning has been putting into Pyroceram® top products since 1964. Digital displays are only available on 5" x 7" and 10" x 10" models. All models include Pyroceram top and a two year warranty.

- **Twin display stirring hot plate** – Truly affordable unit shows both temperature and stirring speed on separate digital displays to ensure accuracy, time and time again.
- **Precise liquid temperatures and stirring speeds** – Temperature accuracy within ±2°C and stirring speeds at ±5% of the speed setting you choose
- **Digital displays** – Indicate when set tempeature and stirring speeds are reached. Facilitiate repeatability of standard operating procedures.
- **Safety indicators** – Power button and hot top indicators warn if unit is plugged in or is too hot to touch. Products have been independently tested and evaluated for compliance to product safety standards.
- **Angled front panel and large knobs** – Minimizes damage from spills and puts controls right at your fingertips

Digital Hot Plates

Model PC-400D shown

Cat. No.	Model Number	Voltage	Temp. Range	Top Plate Size
120V/60Hz				
6795-400D	PC-400D	120V/60Hz	5-550°C	5" x 7" (12.7 x 17.8 cm)
6795-600D	PC-600D	120V/60Hz	5-550°C	10" x 10" (25.4 x 25.4 cm)
100V/60Hz				
6797-400D	PC-400D	100V/60Hz	5-550°C	5" x 7" (12.7 x 17.8 cm)
6797-600D	PC-600D	100V/60Hz	5-550°C	10" x 10" (25.4 x 25.4 cm)
230V/50Hz				
6798-400D	PC-400D	230V/50Hz	5-550°C	5" x 7" (12.7 x 17.8 cm)
6798-600D	PC-600D	230V/50Hz	5-550°C	10" x 10" (25.4 x 25.4 cm)

Digital Stirrers

Model PC-410D shown

Cat. No.	Model Number	Voltage	Stir Range	Top Plate Size
120V/60Hz				
6795-410D	PC-410D	120V/60Hz	60-1150 RPM	5" x 7" (12.7 x 17.8 cm)
6795-610D	PC-610D	120V/60Hz	60-1150 RPM	10" x 10" (25.4 x 25.4 cm)
100V/60Hz				
6797-410D	PC-410D	100V/60Hz	60-1150 RPM	5" x 7" (12.7 x 17.8 cm)
6797-610D	PC-610D	100V/60Hz	60-1150 RPM	10" x 10" (25.4 x 25.4 cm)
230V/50Hz				
6798-410D	PC-410D	230V/50Hz	60-1150 RPM	5" x 7" (12.7 x 17.8 cm)
6798-610D	PC-610D	230V/50Hz	60-1150 RPM	10" x 10" (25.4 x 25.4 cm)

Digital Stirring Hot Plates

Model PC-420D shown

Cat. No.	Model Number	Voltage*	Temp./Stir Range	Top Plate Size
120V/60Hz				
6795-420D	PC-420D	120V/60Hz	5-550°C/60-1150RPM	5" x 7" (12.7 x 17.8 cm)
6795-420KIT†	PC-420D	120V/60Hz	5-550°C/60-1150RPM	5" x 7" (12.7 x 17.8 cm)
6795-620D	PC-620D	120V/60Hz	5-550°C/60-1150RPM	10" x 10" (25.4 x 25.4 cm)
6795-620KIT†	PC-620D	120V/60Hz	5-550°C/60-1150RPM	10" x 10" (25.4 x 25.4 cm)
100V/60Hz				
6797-420D	PC-420D	100V/60Hz	5-550°C/60-1150RPM	5" x 7" (12.7 x 17.8 cm)
6797-620D	PC-620D	100V/60Hz	5-550°C/60-1150RPM	10" x 10" (25.4 x 25.4 cm)
230V/50Hz				
6798-420D	PC-420D	230V/50Hz	5-550°C/60-1150RPM	5" x 7" (12.7 x 17.8 cm)
6798-620D	PC-620D	230V/50Hz	5-550°C/60-1150RPM	10" x 10" (25.4 x 25.4 cm)

†6795-420KIT and 6795-620KIT include the 120V stirring hot plate plus temperature controller, support rod and stir bar retriever.

Temperature Controller and Accessories

Hot Plate Accessories

When used with the digital hot plate or stirring hot plate, the external temperature controller ensures precision temperature accuracy of the liquid inside the vessel as opposed to the temperature of the hot plate top.

Cat. No.	Description	Used With Models
6795-PR*	External Temperature Probe for digital hot plates and stirring hot plates	PC-400D/420D/600D/620D
6795KIT	Accessory Kit (includes 6795PR - External temperature controller, 440129 - Support rods, 18," 6970SR - Stir bar retriever)	PC-400D/420D/600D/620D
440129	Stainless Steel Support Rod – two 9" (45.7 cm) rods, 5/16" diameter. Rods can be screwed together to 18"	All digital and PC-200/210/220/400/410/420
409831	Stainless Steel Support Rod – 24" (61.0 cm), 7/16" diameter	PC-600/610/620
400084	Stainless Steel Support Rod – 12" (30.5 cm), 5/16" diameter	All digital and PC-200/210/220/400/410/420
440140†	Boss Head Clamp for use with 5/16" support rod & holding rod	All hot plates with 5/16" or smaller support rod
440141	Stainless Steel Holding Rod	All hot plates

*Temperature controllers are not available for use with stirrer only units.
†Bosshead clamps to support rod, holding rod connects to bosshead. Temperature controller slides into holding rod.

HOT PLATES

Corning's exclusive glass-ceramic Pyroceram® top is standard on all hot plates except the Scholar™ 170. All Pyroceram units come with a two year warranty.

PC-200 Hot Plate

Micro-chemistry size. Hot top indicator light.

Cat. No.	Model	Power	Top Size	Temp.	Weight	Dimensions (H x W x D)
6795-200	PC-200	120V/60Hz/ 253W/2.1A	4" x 5"	77-1022°F (25-550°C)	4 lbs. (1.8 kg.)	4.4" x 5.8" x 7.3"
6796-200	PC-200	230V/50Hz/ 253W/1.1A	4" x 5"	77-1022°F (25-550°C)	4 lbs. (1.8 kg.)	4.4" x 5.8" x 7.3"
6797-200	PC-200	100V/60Hz/ 253W/2.1A	4" x 5"	77-1022°F (25-550°C)	4 lbs. (1.8 kg.)	4.4" x 5.8" x 7.3"

Note: 230 volt 6796 hot plates come with UK plug.

Scholar™ 170 Hot Plate

An economically priced hot plate that has a white enameled steel top plate that provides heat transfer up to 360°C. Dual heat shields dissipate heat and keep the case cool to the touch. Compact 5" x 5" size saves on bench space. UL/CUL approved, one year warranty.

Cat. No.	Model	Power	Top Size	Temp.	Weight	Dimensions (H x W x D)
6795-170	PC-170	120V/60Hz/ 250W/2.1A	5" x 5"	77-672°F (25-360°C)	3 lbs. (1.3 kg.)	4" x 5" x 5"
6796-170	PC-170	230V/50Hz/ 250W/1.1A	5" x 5"	77-672°F (25-360°C)	3 lbs. (1.3 kg.)	4" x 5" x 5"
6797-170	PC-170	100V/60Hz/ 250W/2.5A	5" x 5"	77-672°F (25-360°C)	3 lbs. (1.3 kg.)	4" x 5" x 5"

HOT PLATES/STIRRERS

Hot plate/stirrer units come with Corning's exclusive Pyroceram® top and have a two year warranty.

PC-220 Hot Plate/Stirrer

Micro-chemistry size. Hot top indicator light.

Cat. No.	Model	Power	Top Size	Stir Range	Temp.	Weight	Dimensions (L x W x D)
6795-220	PC-220	120V/60Hz/ 283W/2.4A	4"x 5"	60-1100 RPM	77-1022°F (25-550°C)	5.0 lbs.	4.4" x 5.8" x 7.3"
6796-220	PC-220	230V/50Hz/ 288W/1.3A	4"x 5"	60-1100 RPM	77-1022°F (25-550°C)	5.0 lbs.	4.4" x 5.8" x 7.3"
6797-220	PC-220	100V/60Hz/ 280W/2.8A	4"x 5"	60-1100 RPM	77-1022°F (25-550°C)	5.0 lbs.	4.4" x 5.8" x 7.3"

Note: 230 volt 6796 hot plate/stirrer comes with UK plug.

STIRRERS

PC-210 Stirrers come w/Corning's exclusive Pyroceram® top and have a two year warranty.

PC-210 Stirrers

Micro-chemistry size.

Cat. No.	Model	Power	Top Size	Stor Range	Weight	Dimensions (L x W x D)
6795-210	PC-210	120V/60Hz/ 33W/0.3A	4"x 5"	60-1100 RPM	4.5 lbs.	4.4" x 5.8" x 7.3"
6796-210	PC-210	230V/50Hz/ 38W/0.17A	4"x 5"	60-1100 RPM	4.5 lbs.	4.4" x 5.8" x 7.3"
6797-210	PC-210	100V/60Hz/ 30W/0.3A	4"x 5"	60-1100 RPM	4.5 lbs.	4.4" x 5.8" x 7.3"

Note: 230 volt 6796 stirrers come with UK plug.

PC-611 Stirrers

The PC-611 is designed to stir large volumes of liquid with ease. The stirrer is designed for 5 gallon vessels (19L), but can stir up to 10 gallons. This powerful stirring is achieved with a very compact design that conserves bench space. The stirrer uses a magnet that is constructed out of rare earth metals for exceptional coupling strength. The magnet's strength also centers the stir bar quickly inside the vessel. Heavy duty motor and rugged plastic (ABS) top will provide years of reliable service. UL/CUL approved, one year warranty. 230V version is CE approved. Special Features: The PC–611 achieves vigorous stirring with a more compact unit at a lower cost than competitive units. The high volume stirrer can handle many applications that previously required an overhead stirrer.

Cat. No.	Model	Power	Top Size	Stir Range	Weight	Dimensions (L x W x D)
6795-611	PC-611	120V/50-60Hz/ 144W/1.2A	11" x 11"	100-1500 RPM	11.0 lbs. (5 kg.)	4.8" x 12.0" x 14.4"

Scholar™ 171 Stirrer

The Scholar 171 Stirrer provides compact design, vigorous stirring with alternating current motor for longer life and rugged construction. UL/CUL approved, one year warranty.

Cat. No.	Model	Power	Top Size	Stir Range	Weight	Dimensions (L x W x D)
6795-171	PC-171	120V/60Hz/ 29W/.24A	5" x 5"	100-1600 RPM	4 lbs. (1.8 kg.)	3.2" x 5.0" x 5.0"

SS2I Stirrers

One position slow speed stirrer with integral control to accommodate up to a 2L vessel. One position model allows the user to spend less and save valuable bench space compared to multiple position units. Integral speed control and glass filled resin platform material.

Cat. No.	System Descr.	Speed Range (RPM)	No. Pos.	Nom. Stir Vol. per Pos.	Max. Vessel (Diam) (mm)	Dimen. LxWxH (mm)	Wgt. (kg)	Motor Type	Power
440811	1 x 2L	10-150	1	2L	150	150 x 150 x 70	0.9	DC, Stepper	120V/ 60H

SS10I Stirrers

One position slow speed stirrer with integral control to accommodate up to a 10L vessel. Smooth reliable stirring at slow speeds helps promote healthy cell growth. Integral speed control and glass filled resin platform material.

Cat. No.	System Descr.	Speed Range (RPM)	No. Pos.	Nom. Stir Vol. per Pos.	Max. Vessel (Diam) (mm)	Dimen. LxWxH (mm)	Wgt. (kg)	Motor Type	Power
440812	1 x 10L	10-150	1	10L	280	260x 260 x 70	2.6	DC, Stepper	120V/ 60Hz

SS4I Stirrers

Four position slow speed stirrer with integral control to accommodate up to four 1L vessels. Multiple positions allow the user to duplicate stirring conditions in up to four vessels. Integral speed control and glass filled resin platform material.

Cat. No.	System Descr.	Speed Range (rpm)	No. Pos.	Nom. Stir Vol. per Pos.	Max. Vessel (Diam) (mm)	Dim. LxWxH (mm)	Wgt. (kg)	Motor Type	Model	Power
440814	4 x 1L	10-150	4	1L	130	260 x 260 x 70	3	DC, Stepper	SS4I	120V/ 60Hz

MP4I, MP5I, MP9I Multiple Position Stirrers with Integral Control

Corning now offers stirrers that stir up to nine vessels at the same time. These stirring platforms come in 4, 5, and 9 position models. The four position model is available with integral control. The four position remote control unit is controlled by a 12VDC remote controller so that it can be controlled from outside a fume hood or incubator. The unit's magnets and DC motor provide smooth, well coupled stirring up to 2,000 rpm. The speed of all positions on the units is set simultaneously with either the integral knob or remote controller.

Multiple Position Stirrers

Integral speed control and glass-filled resin platform material.

Cat. No.	Model	Power	System Descr.	Speed Range (rpm)	No. Pos.	Nom. Stir. Vol. per. Pos.	Max. Vessel (Diam) (mm)	Dimen.	Wgt. (kg)	Motor Type
440824	MP4I	120V/ 60Hz	4 x 1L	350-2000	4	1L	130	260 x 260 x 70	3.1	DC
440825	MP5I	120V/ 60Hz	5 x 400 mL	350-2000	5	400 mL	95	260 x 260 x 70	3.2	DC
440826	MP9I	120V/ 60Hz	9 x 250 mL	350-2000	9	250 mL	75	260 x 260 x 70	3.8	DC

STIR BARS

Cat. No.	Description	Use with Model
400430	Stir Bar, 3/8" x 2"	PC-610/620
401435	Stir Bar, 3/8" x 1"	PC-210/220/410/420
401002	Stir Bars, 60 x 10 mm (5/Pack)	SS10I
401004	Stir Bars, 25 x 6 mm (5/Pack)	SS2I, SS4I
401005	Stir Bars, 15 x 4 mm (5/Pack)	MP9I, IM75
6970SR	Magnetic Stir Bar Retriever	All Corning® Stirrers and Hot Plate/Stirrers

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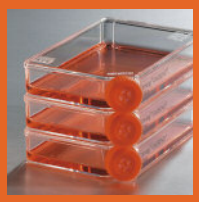

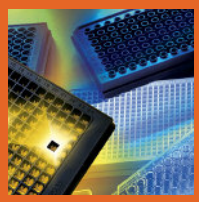

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