

EP Scientific Products



EP Scientific Products are distributed by:

**Greyhound Chromatography
and Allied Chemicals**

6 Kelvin Park, Birkenhead, Merseyside CH41 1LT United Kingdom

Tel: (+44) 0 151 649 4000 Fax: (+44) 0 151 649 4001

Email: sales@greyhoundchrom.com

www.greyhoundchrom.com

 **Scientific Products**
Where Clean Is Critical™



Products for Environmental Sampling

Process Clean Sample Containers and Accessories for Environmental Sampling Application

Pages 1-23



For over 2 decades, **EP Scientific** products have defined clean for sample containers of all types, sizes, materials, and application. We offer a full line of environmental sampling containers processed to meet or exceed EPA requirements. Containers for Critical Environment applications are processed and certified to each customer's specifications. EP Scientific, *where clean is critical... every container, every time.*

Critical Environment Products

Low Particle, Low TOC,
Depyrogenated and Clean
Packaged Products for Critical
Environments

Pages 24-35



Technical Information

Expanded Technical Information
Section and a Guide to EP
Custom Processing Services

Pages 36-55



Table of Contents

About.....	vi
------------	----

EP Scientific Environmental Sampling Products

About EP Scientific Environmental Sampling Containers 1

Glassware 2-7

Boston Round Bottles, Glass.....	2
Boston Round Closed Top Bottles, Glass.....	2
Storage Jugs, Glass.....	3
Straight Sided Wide Mouth Jars, Closed Top, Clear Glass.....	4
Straight Sided Wide Mouth Jars, Open Top, Clear Glass.....	4
Straight Sided Wide Mouth Jars, Closed Top, Amber Glass.....	5
Straight Sided Wide Mouth Jars, Open Top, Amber Glass.....	5
Wide Mouth Packers, Amber Glass.....	5
EPA VOA Vials, Open Top.....	6
EPA VOA Vials, Closed Top.....	6
EPA VOA Vials, Premium Pack, Open Top.....	7
EPA VOA Vials, Premium Pack, Closed Top.....	7
Dust Covers (for EPA VOA Vials).....	7
Vial Shippers (empty shipping containers for EPA VOA Vials).....	7

Plasticware 8-12

Boston Rounds, HDPE.....	8
Oblongs, Wide Mouth, HDPE.....	8
Narrow Mouth Cylinders, HDPE.....	9
Storage Jugs, HDPE.....	9
Straight Sided Wide Mouth Jars, HDPE.....	10
Cubitainers®, LDPE.....	10
Wide Mouth Jars, HDPE.....	11
Nalgene Narrow Mouth Bottles.....	12
Nalgene Wide Mouth Bottles.....	12

Closures 13-14

Polypropylene Closed Top Caps.....	13
Polypropylene Open Top Caps, Welded Liners.....	14
Septa.....	14

Chemical Preservatives 15-19

Sulfuric Acid Preservative.....	15
Nitric Acid Preservative.....	16
Hydrochloric Acid Preservative.....	16
Sodium Thiosulfate Preservative.....	16
Zinc Acetate Preservative.....	17
Sodium Hydroxide Preservative.....	17
Nitric Acid/Potassium Dichromate Preservative.....	17
Monochloroacetic Acid Potassium Acetate Buffer.....	18
Pre-printed Preservative Labels.....	18
EP Preserved™ Containers.....	19

Soil, Water & Wastewater Collection 20-21

VOC Sampling Vials.....	20
Flip Top Coliform Water Test Container.....	21
Steri-Bottles for Coliform Sampling.....	21

Gas Sampling Bags 22

Environmental Sampling Accessories 23

Environmental Sampling Guide.....	23
Container Labels.....	23
Custody Seals.....	23

EP Scientific Critical Environment Products

About EP Scientific Critical Environment Products	25
Certified Containers	26
Particle-Certified Containers, Glass	26
Particle-Certified Containers, HDPE	27
Particle-Certified Containers, Fluoropolymer	27
Total Organic Carbon (TOC) Certified Containers	28
Specialty Water	29
TOC Water	29
Depyrogenated and Sterilized Containers	30
Depyrogenated Glass Containers	30
Sterile Glass Containers	30
Surface Modification Products and Services	32-33
Custom Surface Modification Services	32
Silanized Screw Thread Vials	33
Silanized Culture Tubes	33
Custom Cleaning Services	35

Technical Information

EP Custom Services	37-40
Custom Cleaning Specification Sheet	38
Process Definitions	39
Specifications	41-57
Custom Clean Specifications	41
Volatiles Certificate of Analysis	42
Container Specifications and Page Number Index	43-57
Terms and Conditions of Sale	58-59



EP Scientific Products

Recognized for Two Decades as the Standard of Service and Integrity for Clean Sample Containers in Every Environment

EP Scientific, part of Thermo Fisher Scientific, is located in Miami, Oklahoma.

For 20 years, we have built on our expertise as one of only two suppliers of sample containers proven to meet the strict requirements of the EPA Superfund Program.

Clean Is Critical to your processes and that the most rigorous laboratory technique should never be compromised by a contaminated sample container.

In 1987, we were awarded the contract under the EPA Superfund Program as the designated Western Region Sample Bottle Repository supplier. Based on our demonstrated ability to continually supply contaminant-free containers, we have become the industry leader in clean processed containers.

In accordance with the EPA's detailed guidelines set forth in the original Statement of Work, glass and plastic sample containers are cleaned, packaged, and certified for use as sample collection and storage containers.

Our original product offering, comprised of the 13 containers specified by the EPA for sampling water and soils, has been expanded to more than 950 items as new applications and customer demands for clean sample containers have increased.

We have remained the industry leader due to our standards of quality and customer-focused approach to service. Our experience in working with the EPA Superfund Program has helped us to develop proven methods for providing the quality and traceability that our customers demand.

Going Far Beyond Providing a Sample Container

A clean sample container is only the beginning of the story.

We stand behind all of our products with unsurpassed quality and support made possible by the most knowledgeable staff in the industry. Each product is the result of facilities, experience and practices that set us apart in every way. The extra value includes:

- A state-of-the-art lab with the latest analytical testing equipment and technology
- Retention of all raw data and benchwork
- "Cradle to grave" traceability made possible by archived samples from every lot tested for 10 years
- Customized end products through processing, packaging, and certification fitting the specific needs and unique requirements of our customers
- Manufacturing processes and cleanroom facilities maintained to standards that often exceed government regulations and surpass our customers' expectations

Experience Is the Difference

We have been there for our customers right from the start. No other company can match our record of continuous performance in the environmental container industry.

- The only supplier to continuously offer in-house analytical services to support environmental containers
- Participated and maintained certification in the Contract Lab Performance (CLP) program since the program originated
- Awarded Corps of Engineers Certification as a supplier of environmental sampling containers

Customized Products for New Applications and Markets

We continue to lead the industry in the flexibility and diversity of our product offerings. We recognize the need for new and innovative solutions to meet the growing need for higher standards of purity demanded by today's ultra-sensitive instrumentation. The pharmaceutical, biotech and semiconductor industries seek out our products and expertise to resolve the difficult challenge of obtaining clean containers.

Critical Environment

Ultra-clean containers for the cleanest of environments

We have developed applications, processes and facilities allowing the use of our environmental sampling bottles across many diverse industries. Today, we offer an extensive line of standard products as well as custom services, to provide contaminant-free containers for every environment.

Each customer is able to define the meaning of "clean" in a particular critical environment. Our Critical Environment products are characterized by:

- Flexibility – Small or large quantities with scale-up planning
- Full customization – Cleaning, packaging, and certification for specific needs
- Cleanroom facilities – Products handled and packaged in Class 100/10 cleanrooms
- Full traceability – Including long term archival services
- Open-door audit policy – Satisfy your regulatory needs without compromise
- Complete product offering - Cleaning services for containers from 1mL to 20L

EP Scientific products and services for critical environments provide a fast, cost effective way to meet your clean process sample container needs, small or large. **Our Custom Cleaning Specification Sheet is located on page 38 of this catalog.** Let us assist you in completing this guide to our custom cleaning services. You will find no easier path to solutions for your process container needs.



Products for Environmental Sampling



EP SCIENTIFIC ENVIRONMENTAL SAMPLING CONTAINERS

We offer over 200 standard glass and plastic sampling containers meticulously prepared to meet or exceed EPA standards.

EP Scientific Standard Glassware and plasticware are processed by one of four methods:

- **Procedure A:**
 - This procedure is designed for clear and amber glass of 60 mL size and larger. The Level 1 (L1) containers are certified to meet or exceed EPA standards for metals, pesticides, and semi-volatiles.
- **Procedure B:**
 - This procedure is designed for 40 mL borosilicate glass vials and a select number of larger bottles. The Level 1 (L1) containers are certified to meet or exceed EPA standards for volatiles.
- **Procedure C:**
 - This procedure is designed for HDPE sampling containers. The Level 1 (L1) containers are certified to meet or exceed EPA standards for metals, cyanide and fluoride.
- **Procedure D:**
 - This procedure is designed for LDPE Cubitainers®. The Level 1 (L1) containers are certified to meet or exceed EPA standards for conductivity.

EP Scientific standard glassware and plasticware are available with or without certificates of analysis:

- **Level 1 (CAT # L1):**
 - Level 1 Certified glassware and plasticware receive full EPA quality assurance treatment. Containers are processed according to EPA recommended wash procedures and undergo strict quality control analysis. Each case of containers is then custody sealed. Chain of custody is intact right from the start. Each container is lot number labeled for traceability to the enclosed Certificate of Analysis. Custody seals are available in various sizes.
- **Level 3 (CAT # L3):**
 - Containers do not receive an EPA washing treatment and are ready for your own cleaning procedure. Containers are assembled and meet EPA recommended guidelines for sample container material component specifications.

Custom Ware™

In addition to our standard glassware offering, we can provide products meeting your specifications. Custom Ware™ is available by special order through customer service.

BOSTON ROUND BOTTLES

NARROW MOUTH BOTTLES ARE PREFERRED FOR LIQUID SAMPLING

BOSTON ROUND BOTTLES

- Available in clear and amber glass
- Polypropylene closed top caps with 0.015" thick PTFE liners included
- **Procedure A** processing and certification meets or exceeds EPA standards for metals, pesticides and semi-volatiles
- Choose amber glass for light sensitive applications

CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CAP SIZE	COLOR	QTY/CASE
115-125A	315-125A	125/4	24-414	Amber	12
114-250A	314-250A	250/8	24-414	Amber	12
114-250C	314-250C	250/8	24-414	Clear	12
113-500A	313-500A	500/16	28-400	Amber	12
113-500C	313-500C	500/16	28-400	Clear	12
112-01A	312-01A	1L/32	33-430	Amber	12
112-01C	312-01C	1L/32	33-400	Clear	12



BOSTON ROUNDS WITH BONDED SEPTA

BOSTON ROUND OPEN TOP BOTTLES

- Amber glass bottles preferred for light-sensitive applications
- Open top cap exposes septum for sample retrieval without removing cap
- Polypropylene cap with bonded PTFE/silicone septum included
- Bonded septum resists dislodging when punctured by needles
- **Procedure B** processing and certification meets or exceeds EPA standards for volatiles

CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CAP SIZE	COLOR	QTY/CASE
S114-125A	S314-125A	125/4	24-414	Amber	12
S114-250A	S314-250A	250/8	24-414	Amber	12
142-01A/WS	342-01A/WS	1L/32	33-430	Amber	12



BOSTON ROUND CLOSED TOP BOTTLES

- Available in clear or amber glass
- Includes a polypropylene cap with PTFE/silicone septum
- **Procedure B** processing and certification meets or exceeds EPA standards for volatiles

CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CAP SIZE	COLOR	QTY/CASE
S114-250CT	S314-250CT	250/8	24-414	Amber	12
S114-250C/CT	S314-250C/CT	250/8	24-414	Clear	12



STORAGE JUGS

PREFERRED FOR LIQUID SAMPLING

STORAGE JUGS

- Narrow mouth bottles preferred for liquid sampling
- Amber glass bottles protect light-sensitive samples
- **Procedure A** processing and certification meets or exceeds EPA standards for metals, pesticides and semi-volatiles
- Includes polypropylene caps with PTFE liners

CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CAP SIZE	COLOR	QTY/CASE
110-80A	310-80A	2.5L/80	38-430	Amber	6
111-04A	311-04A	4L/128	38-430	Amber	4



We offer over 950 standard EP Scientific products

See pages 37-40 of this catalog for a wide variety of custom processing services that can be applied to our containers or yours.

The Custom Cleaning Spec Sheet makes it easy to get the product that you need!

WIDE MOUTH JARS

PREFERRED FOR SOLIDS AND SEMI-SOLIDS

CLEAR STRAIGHT SIDED JARS

Recommended Application:

Procedure A - Semivolatiles, Pesticides and Metals Sampling

Procedure B - Volatiles

- Wide mouth jars preferred for solids, semi-solids, and hazardous waste samples
- Solid top polypropylene caps with 0.015" thick PTFE liners included



CAT # (L1)	CAT # (L3)	PROCEDURE	CAPACITY mL/OZ	CAP SIZE	QTY/CASE
130-02C (Short)	330-02C (Short)	A	60/2	53-400	24
142-02C (Short)		B	60/2	53-400	24
130-04C (Short)	330-04C (Short)	A	125/4	58-400	24
130-04C/TL (Tall)	330-04C/TL (Tall)	A	125/4	48-400	24
142-04C (Short)		B	125/4	58-400	24
142-04C/TL (Tall)		B	125/4	48-400	24
131-08C (Short)	331-08C (Short)	A	250/8	70-400	24
131-08C/TL (Tall)	331-08C/TL (Tall)	A	250/8	58-400	12
142-08C (Short)		B	250/8	70-400	24
132-16C (Short)	332-16C (Short)	A	500/16	89-400	12
132-16C/TL (Tall)	332-16C/TL (Tall)	A	500/16	63-400	12
142-16C (Short)		B	500/16	89-400	12
133-32C	333-32C	A	1L/32	89-400	12
117-2L	317-2L	A	2L/64	83-400	6
117-4L	317-4L	A	4L/128	110-400	4



CLEAR STRAIGHT-SIDED JARS WITH BONDED SEPTA

Recommended Applications:

Procedure A - Semivolatiles, Pesticides and Metals Sampling

Procedure B - Volatiles

- Wide mouth jars are preferred for solids, semi-solids, and hazardous waste samples
- Open top polypropylene cap with bonded PTFE/silicone septum included



CAT # (L1)	CAT # (L3)	PROCEDURE	CAPACITY mL/OZ	CAP Size	QTY/CASE
130-02C/WS	330-02C/WS	A	60/2	53-400	24
142-02C/WS		B	60/2	53-400	24
130-04C/WS	330-04C/WS	A	125/4	58-400	24
142-04C/WS		B	125/4	58-400	24

WIDE MOUTH AMBER JARS

PREFERRED FOR SOLIDS AND SEMI-SOLIDS

AMBER STRAIGHT SIDED JARS

- **Procedure A** - Semivolatiles, Pesticides and Metals Sampling
- Wide mouth jars preferred for solids, semi-solids and hazardous waste samples
- Solid polypropylene caps with 0.015" PTFE liners included
- Amber glass jars protect light-sensitive samples

CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CA	QTY/CASE
130-02A	330-02A	60/2	51-400	24
130-04A	330-04A	125/4	58-400	24
131-08A	331-08A	250/8	70-400	24
133-32A	333-32A	1000/32	89-400	12



AMBER STRAIGHT SIDED JARS WITH BONDED SEPTA

- **Procedure A** - Semivolatiles, Pesticides and Metals Sampling
- **Procedure B** - Volatiles
- Wide mouth jars preferred for solids, semi-solids, and hazardous waste samples
- Open top polypropylene cap with bonded PTFE/silicone septum included
- Amber glass jars protect light-sensitive samples

CAT # (L1)	CAT # (L3)	PROCEDURE	CAPACITY mL/OZ	CAP SIZE	QTY/CASE
130-02A/WS	330-02A/WS	A	60/2	53-400	24
142-02A/WS		B	60/2	53-400	24
130-04A/WS*	330-04A/WS	A	125/4	58-400	24
131-08A/WS*	331-08A/WS*	A	250/8	70-400	24
142-08A/WS*		B	250/8	70-400	24
143-02A/WS	343-02A/WS	B (WM PACKER)	60/2	33-400	24
142-04A/WS		B	125/4	58/400	24

* Available by special request



AMBER WIDE MOUTH PACKERS

- **Procedure A** - Semivolatiles, Pesticides and Metals Sampling
- Wide mouth jars are preferred for solids, semi-solids and hazardous waste samples
- Solid polypropylene caps with 0.015" thick PTFE liners included
- Amber glass jars protect light-sensitive samples

CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CAP SIZE	QTY/CASE
120-02A	320-02A	60/2	33-400	24
120-04A	320-04A	125/4	38-400	12
121-08A	321-08A	250/8	45-400	12
122-16A	322-16A	500/16	53-400	12
123-32A	323-32A	1L/32	53-400	12
123-40A	323-40A	1.25L/40	70-400	24
123-80A	323-80A	2.5L/80	70-400	4



EPA VOA VIALS

RECOMMENDED FOR VOLATILE ORGANIC SAMPLING

VIALS

OPEN TOP VIALS

- **Procedure B** processing and certification meets or exceeds EPA standards for volatiles
- Available in clear or amber borosilicate glass
- Assembled polypropylene caps and 0.060" or 0.125" bonded PTFE/silicone septa
- Directly compatible with autosamplers
- Chipboard divider packaging to cushion and protect vials during shipping



CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CAP SIZE	COLOR	QTY/CASE
139-20C/EP	339-20C	20 mL	24-414	Clear	72
140-40C/EP	340-40C	40 mL	24-414	Clear	72
140-40C/EP/TS*	340-40C/TS*	40 mL	24-414	Clear	72
140-40C/DB	340-40C/DB	40 mL	24-414	Clear	144
140-60C	340-60C	60 mL	24-414	Clear	144
139-20A/EP	339-20A	20 mL	24-414	Amber	72
141-40A/EP	341-40A	40 mL	24-414	Amber	72
141-40A/EP/TS*	341-40A/TS*	40 mL	24-414	Amber	72
141-40A/DB	341-40A/DB	40 mL	24-414	Amber	144
141-60A	341-60A	60 mL	24-414	Amber	144
GVB-100A		40 mL	24-414	Amber	100
GVB-100C		40 mL	24-414	Clear	100

* Denotes 0.060" thin septum

CLOSED TOP VIALS

- Available in clear or amber borosilicate glass
- Assembled with polypropylene caps with 0.125" bonded PTFE/silicone septa
- **Procedure B** processing and certification meets or exceeds EPA standards for volatiles
- Chipboard divider packaging to cushion and protect vials during shipping



CAT # (L1)	CAT # (L3)	CAPACITY mL/OZ	CAP SIZE	COLOR	QTY/CASE
139-20C/EP/CT	339-20C/CT	20 mL	24-414	Clear	72
140-40C/EP/CT	340-40C/CT	40 mL	24-414	Clear	72
139-20A/EP/CT	339-20A/CT	20 mL	24-414	Amber	72
141-40A/EP/CT	341-40A/CT	40 mL	24-414	Amber	72

EPA VOA VIALS

RECOMMENDED FOR VOLATILE ORGANIC SAMPLING

PREMIUM PACK OPEN TOP VIALS

- Available in clear or amber borosilicate glass
- Assembled with polypropylene caps with 0.060" or 0.125" bonded PTFE/silicone septa
- Included polyethylene dust covers protect injection surface from contamination prior to use
- Vials are packaged in foam sleeves
- **Procedure B** processing and certification meets or exceeds EPA standards for volatiles

CAT # L1	CAPACITY	CAP SIZE	COLOR	QTY/CASE
139-20C	20 mL	24-414	Clear	72
140-40C	40 mL	24-414	Clear	72
140-40C/TS*	40 mL	24-414	Clear	72
140-40C/VK	40 mL	24-414	Clear	9
139-20A	20 mL	24-414	Amber	72
141-40A	40 mL	24-414	Amber	72
141-40A/TS*	40 mL	24-414	Amber	72
141-40A/VK	40 mL	24-414	Amber	9

* Denotes 0.060" thin septa



PREMIUM PACK CLOSED TOP VIALS

- Available in clear or amber borosilicate glass
- Assembled with polypropylene caps with 0.125" bonded PTFE/silicone septa
- Vials are packaged in foam sleeves
- **Procedure B** processing and certification meets or exceeds EPA standards for volatiles

CAT # L1	CAPACITY	CAP SIZE	COLOR	QTY/CASE
139-20C/CT	20 mL	24-414	Clear	72
140-40C/CT	40 mL	24-414	Clear	72
139-20A/CT	20 mL	24-414	Amber	72
141-40A/CT	40 mL	24-414	Amber	72

DUST COVERS

- Full cap cover for VOA vials allows for septum expansion and helps to prevent contamination
- Precleaned and other quantities available upon request

CAT #	DESCRIPTION	QTY/Case
DC-VOA	Dust Covers	500



VIAL SHIPPERS

- Soft polyurethane foam, rigid polystyrene or chipboard boxes allow safe transport of VOA vials

CAT #	DESCRIPTION	CAPACITY	QTY/CASE
340-VFS	Foam Sleeves (Polystyrene/ Hard)	36 vial slots	1
345-VFS	Foam Sleeves (Polyurethane/ Soft)	36 vial slots	1
VB-003/EP	Vial Box with Chipboard Dividers	72 vial slots	1



PLASTIC CONTAINERS

RECOMMENDED FOR CYANIDE, FLUORIDE AND METALS

HDPE BOSTON ROUNDS

- Boston round bottle provides easier filling and pouring
- Deeper thread pattern reduces possibility of sample leakage
- Includes polypropylene cap with polyethylene liner
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
156-125W/BR	356-125W/BR	125/4	24-410	48
156-125W/BR/BPC	356-125W/BR/BPC	125/4	24-410	550
	356-125W/BR/BPS	125/4	24-410	550
	356-125W/BR/BP	125/4	24-410	550
157-250W/BR	357-250W/BR	250/8	28-410	24
157-250W/BR/BPC	357-250W/BR/BPC	250/8	28-410	280
	357-250W/BR/BPS	250/8	28-410	280
	357-250W/BR/BP	250/8	28-410	280
151-500W/BR	351-500W/BR	500/16	38-430	24
151-500W/BR/BPC	351-500W/BR/BPC	500/16	38-430	135
	351-500W/BR/BPS	500/16	38-430	135
	351-500W/BR/BP	500/16	38-430	135
150-01W/BR	350-01W/BR	960/32	38-430	12
150-01W/BR/BPC	350-01W/BR/BPC	960/32	38-430	70
	350-01W/BR/BPS	960/32	38-430	70
	350-01W/BR/BP	960/32	38-430	70



HDPE OBLONGS-WIDE MOUTH

- Larger mouth for faster filling and pouring of liquid samples
- Includes polypropylene cap with polyethylene liner
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
170-04/WM	370-04/WM	125/4	38-400	48
170-04/WM/BPC	370-04/WM/BPC	125/4	38-400	500
	370-04/WM/BPS	125/4	38-400	500
	370-04/WM/BP	125/4	38-400	500
170-08/WM	370-08/WM	250/8	43-400	24
170-08/WM/BPC	370-08/WM/BPC	250/8	43-400	275
	370-08/WM/BPS	250/8	43-400	275
	370-08/WM/BP	250/8	43-400	275
170-16/WM	370-16/WM	500/16	43-400	24
170-16/WM/BPC	370-16/WM/BPC	500/16	43-400	160
	370-16/WM/BPS	500/16	43-400	160
	370-16/WM/BP	500/16	43-400	160
170-32/WM	370-32/WM	960/32	43-400	12
170-32/WM/BPC	370-32/WM/BPC	960/32	43-400	85
	370-32/WM/BPS	960/32	43-400	85
	370-32/WM/BP	960/32	43-400	85



PLASTIC CONTAINERS

RECOMMENDED FOR CYANIDE, FLUORIDE AND METALS

HDPE CYLINDERS

- HDPE Cylinder is the original EPA specified bottle for liquid sampling
- Includes polypropylene cap with polyethylene liner
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
156-060W	356-060W	60/2	20-400	48
156-060W/BPC	356-060W/BPC	60/2	20-400	875
	356-060W/BPS	60/2	20-400	875
	356-060W/BP	60/2	20-400	875
156-125W	356-125W	125/4	24-410	48
156-125W/BPC	356-125W/BPC	125/4	24-410	500
	356-125W/BPS	125/4	24-410	500
	356-125W/BP	125/4	24-410	500
157-250W	357-250W	250/8	24-410	24
157-250W/BPC	357-250W/BPC	250/8	24-410	230
	357-250W/BPS	250/8	24-410	230
	357-250W/BP	250/8	24-410	230
151-500W	351-500W	500/16	28-410	24
151-500W/BPC	351-500W/BPC	500/16	28-410	216
	351-500W/BPS	500/16	28-410	216
	351-500W/BP	500/16	28-410	216
150-01W	350-01W	1L/32	28-410	12
150-01W/BPC	350-01W/BPC	1L/32	28-410	65
	350-01W/BPS	1L/32	28-410	65
	350-01W/BP	1L/32	28-410	65



HDPE JUGS

- Includes polypropylene cap with polyethylene liner
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
110-2L	310-2L	2L/64	38-400	6
110-2L/BPC	310-2L/BPC	2L/64	38-400	40
	310-2L/BPS	2L/64	38-400	40
	310-2L/BP	2L/64	38-400	40
111-4L	311-4L	4L/128	38-400	6
111-4L/BPC	311-4L/BPC	4L/128	38-400	18
	311-4L/BPS	4L/128	38-400	18
	311-4L/BP	4L/128	38-400	18

HDPE CAT # Suffix

- BP** = Bulk pack sold without cap
- BPC** = Bulk pack, cap attached
- BPS** = Bulk pack cap packaged separately



PLASTIC CONTAINERS

RECOMMENDED FOR CYANIDE, FLUORIDE AND METALS

HDPE STRAIGHT SIDED JARS

- Straight-sided jar makes it easier to fill and empty solid samples
- Includes polypropylene cap with polyethylene liner
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
156-125W/SS	356-125W/SS	125/4	70-400	24
156-125W/SS/BPC	356-125W/SS/BPC	125/4	70-400	280
	356-125W/SS/BPS	125/4	70-400	280
	356-125W/SS/BP	125/4	70-400	280
151-500W/SS	351-500W/SS	500/16	89-400	24
151-500W/SS/BPC	351-500W/SS/BPC	500/16	89-400	110
	351-500W/SS/BPS	500/16	89-400	110
	351-500W/SS/BP	500/16	89-400	110
150-01W/SS	350-01W/SS	960/32	89-400	12
150-01W/SS/BPC	350-01W/SS/BPC	960/32	89-400	84
	350-01W/SS/BPS	960/32	89-400	84
	350-01W/SS/BP	960/32	89-400	84



LDPE CUBITAINERS®

- Low density polyethylene (LDPE) collapsible, nesting containers for convenient storage
- Includes polypropylene cap with polyethylene liner
- **Procedure D** processing and certification meets or exceeds EPA standards for conductivity

CAT # L1	CAT # L3	CAPACITY	CAP SIZE	QTY/CASE
160-025	360-025	1 quart	38-400	12
160-025/BPC	360-025/BPC	1 quart	38-400	144
	360-025/BP	1 quart	38-400	144
160-01	360-01	1 gallon	38-400	12
160-01/BPC	360-01/BPC	1 gallon	38-400	160
	360-01/BP	1 gallon	38-400	160
160-2.5	360-2.5	2.5 gallon	38-400	12
160-2.5/BPC	360-2.5/BPC	2.5 gallon	38-400	36
	360-2.5/BP	2.5 gallon	38-400	36
160-05	360-05	5 gallon	38-400	4
160-05/BPC	360-05/BPC	5 gallon	38-400	36
	360-05/BP	5 gallon	38-400	36



PLASTIC CONTAINERS

RECOMMENDED FOR CYANIDE, FLUORIDE AND METALS

HDPE WIDE MOUTH JARS

- Wide mouth jar makes it easier to sample semi-solids and viscous liquids
- Includes polypropylene cap with polyethylene liner
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
156-060W/WM/BPC	356-060W/WM/BPC	60/2	38-400	750
	356-060W/WM/BPS	60/2	38-400	750
	356-060W/WM/BP	60/2	38-400	750
156-125W/WM	356-125W/WM	125/4	38-400	48
156-125W/WM/BPC	356-125W/WM/BPC	125/4	38-400	540
	356-125W/WM/BPS	125/4	38-400	540
	356-125W/WM/BP	125/4	38-400	540
157-250W/WM	357-250W/WM	250/8	48-400	24
157-250W/WM/BPC	357-250W/WM/BPC	250/8	48-400	280
	357-250W/WM/BPS	250/8	48-400	280
	357-250W/WM/BP	250/8	48-400	280
151-500W/WM	351-500W/WM	500/16	53-400	24
151-500W/WM/BPC	351-500W/WM/BPC	500/16	53-400	230
	351-500W/WM/BPS	500/16	53-400	230
	351-500W/WM/BP	500/16	53-400	230
150-01W/WM	350-01W/WM	1L/32	63-400	12
150-01W/WM/BPC	350-01W/WM/BPC	1L/32	63-400	80
	350-01W/WM/BPS	1L/32	63-400	80
	350-01W/WM/BP	1L/32	63-400	80
150-02W/WM	350-02W/WM	2L/64	100-400	6
150-02W/WM/BPC	350-02W/WM/BPC	2L/64	100-400	35
	350-02W/WM/BPS	2L/64	100-400	35
	350-02W/WM/BP	2L/64	100-400	35
150-04W/WM	350-04W/WM	4L/128	100-400	4
150-04W/WM/BPC	350-04W/WM/BPC	4L/128	100-400	24
	350-04W/WM/BPS	4L/128	100-400	24
	350-04W/WM/BP	4L/128	100-400	24



HDPE CAT # Suffix

- BP =** Bulk pack sold without cap
BPC = Bulk pack, cap attached
BPS = Bulk pack cap packaged separately

THERMO SCIENTIFIC NALGENE PLASTIC CONTAINERS

RECOMMENDED FOR CYANIDE, FLUORIDE AND METALS

NALGENE® NARROW MOUTH (NATURAL) BOTTLES

- Assembled with Nalgene polypropylene cap
- Linerless cap design provides a secure seal
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
156-060W/N/BPC	356-060W/N/BPC	60/2	20-410	1000
	356-060W/N/BPS	60/2	20-410	1000
156-125W/N	356-125W/N	125/4	24-415	48
156-125W/N/BPC	356-125W/N/BPC	125/4	24-415	500
	356-125W/N/BPS	125/4	24-415	500
157-250W/N	357-250W/N	250/8	24-415	24
157-250W/N/BPC	357-250W/N/BPC	250/8	24-415	250
	357-250W/N/BPS	250/8	24-415	250
151-500W/N	351-500W/N	500/16	28-415	24
151-500W/N/BPC	351-500W/N/BPC	500/16	28-415	125
	351-500W/N/BPS	500/16	28-415	125
150-01W/N	350-01W/N	1L/32	38-430	12
150-01W/N/BPC	350-01W/N/BPC	1L/32	38-430	50
	350-01W/N/BPS	1L/32	38-430	50



NALGENE WIDE MOUTH (NATURAL) BOTTLES

- Assembled with Nalgene-polypropylene cap
- Linerless cap design provides a secure seal
- **Procedure C** processing and certification meets or exceeds EPA standards for metals, cyanide and fluoride

CAT # L1	CAT # L3	mL/oz	CAP SIZE	QTY/CASE
156-030WM/N/BPC	356-030WM/N/BPC	30/1	28-415	1000
	356-030WM/N/BPS	30/1	28-415	1000
156-060WM/N/BPC	356-060WM/N/BPC	60/2	28-415	1000
	356-060WM/N/BPS	60/2	28-415	1000
156-125WM/N	356-125WM/N	125/4	38-415	48
156-125WM/N/BPC	356-125WM/N/BPC	125/4	38-415	500
	356-125WM/N/BPS	125/4	38-415	500
157-250WM/N	357-250WM/N	250/8	43-415	24
157-250WM/N/BPC	357-250WM/N/BPC	250/8	43-415	250
	357-250WM/N/BPS	250/8	43-415	250
151-500WM/N	351-500WM/N	500/16	53-415	24
151-500WM/N/BPC	351-500WM/N/BPC	500/16	53-415	125
	351-500WM/N/BPS	500/16	53-415	125
150-01WM/N	350-01WM/N	1L/32	63-415	12
150-01WM/N/BPC	350-01WM/N/BPC	1L/32	63-415	50
	350-01WM/N/BPS	1L/32	63-415	50



HDPE CAT # Suffix

- BP =** Bulk pack sold without cap
- BPC =** Bulk pack, cap attached
- BPS =** Bulk pack cap packaged separately

REPLACEMENT CAPS AND SEPTA

REPLACEMENT CAPS ARE AVAILABLE TO FIT ALL STANDARD SIZE CONTAINERS

POLYPROPYLENE CAPS WITH BONDED PTFE LINERS OR F217 UNFACED FOAM LINERS

- Unprocessed bulk packaged caps

GPI Thread	CAT # PTFE Liner	CAT # F217 Unfaced Foam Liner	QTY/CASE
24-410		24-410-F-3C	100
24-410		24-410-F-3M	1000
24-414	24-414TL-3C		100
24-414	24-414TL-3M		1000
28-400	28-400TL-3C		100
28-400	28-400TL-3M		1000
28-410		28-410FLC-3C	100
28-410		28-410FLC-3M	1000
33-400	33-400TL-3C		100
33-400	33-400TL-3M		1000
33-430	33-430TL-3C		100
33-430	33-430TL-3M		1000
38-400	38-400TL-3C	38-400FLC-3C	100
38-400	38-400TL-3M	38-400FLC-3M	1000
38-430	38-430TL-3C	38-430FLC-3C	100
38-430	38-430TL-3M	38-430FLC-3M	1000
43-400		43-400FLC-3C	100
43-400		43-400FLC-3M	1000
45-400	45-400TL-3C	45-400FLC-3C	100
45-400	45-400TL-3M	45-400FLC-3M	1000
48-400	48-400TL-3C		100
48-400	48-400TL-3M		1000
51-400	51-400TL-3C		100
51-400	51-400TL-3M		1000
53-400	53-400TL-3C	53-400FLC-3C	100
53-400	53-400TL-3M	53-400FLC-3M	1000
58-400	58-400TL-3C		100
58-400	58-400TL-3M		1000
63-400	63-400TL-3C	63-400FLC-3C	100
63-400	63-400TL-3M	63-400FLC-3M	1000
70-400	70-400TL-3C	70-400FLC-3C	100
70-400	70-400TL-3M	70-400FLC-3M	1000
83-400	83-400TL-3C		100
83-400	83-400TL-3M		1000
89-400	89-400TL-3C	89-400FLC-3C	100
100-400	100-400TL-3C	100-400FLC-3C	100
120-400	120-400TL-3C		100



REPLACEMENT CAPS AND SEPTA

REPLACEMENT CAPS ARE AVAILABLE TO FIT ALL STANDARD SIZE CONTAINERS

OPEN TOP CAPS WITH BONDED PTFE/SILICONE LINERS

GPI Thread	CAT #	QTY/CASE
20-400	20-400/WS-2	100
20-400	20-400/WS-3	100
24-414	24-414/WS-3C	100
24-414	24-414/WS-3M	1000
24-414	24-414WS/TS-3C	100
24-414	24-414WS/TS-3M	1000
33-430	33-430/WS-3C	100
33-430	33-430/WS-3M	1000
38-400*	38-400/WS-3C	100
38-400*	38-400/WS-3M	1000
45-400*	45-400/WS-3C	100
45-400*	45-400/WS-3M	1000
48-400*	48-400/WS-3C	100
48-400*	48-400/WS-3M	1000
51-400	51-400/WS-3C	100
51-400	51-400/WS-3M	1000
53-400	53-400/WS-3C	100
53-400	53-400/WS-3M	1000
58-400	58-400/WS-3C	100
58-400	58-400/WS-3M	1000
70-400*	70-400/WS-3C	100
70-400*	70-400/WS-3M	1000

* Available by special request



FLAT DISC SEPTA, PTFE-FACED SILICONE

CAT # Pre-cleaned	CAT # L3	GPI THREAD	PTFE-THICKNESS	SILICONE THICKNESS	QTY/CASE
200-060	300-060	24-400	0.005"	0.055"	24
S24-400-S2	S24-400-S3	24-400	0.005"	0.055"	144
200-125	300-125	24-400	0.005"	0.12"	24



CHEMICAL PRESERVATIVES

Our preservatives are chemical solutions for the preservation of environmental samples.

Each unit is color-coded and labeled to minimize error in field use.

Each preservative is also offered with full QA/QC and written certification of purity.

These may be ordered by placing a "Q" suffix with the catalog number. If the amount and ratio of your choice of preservatives is not listed, we will custom mix to your specifications.

All preservatives are shipped in compliance with 49CFR 173.4 (Small Quantities) with M.S.D.S. enclosed.

AMPOULES

Our ampoules are machine-welded for a more consistent, leak-proof seal. All of our ampoules are pre-scored and a "breaker" is included with each case. The 1 mL and 2 mL ampoules have special sized necks for easier dispersal of the preservative.

VIALSERVATIVES™

- We offer chemical preservatives in convenient, leak-proof polypropylene vials. An easy pour into the sampling container with the option to re-close.

Vialservatives™ provide



SULFURIC ACID PRESERVATIVE

- Application: Stabilizes samples to be analyzed for nitrate/nitrite, chemical oxygen demand, oil and grease/TPH, phenols/ammonia, nitrogen/TOC/TOX, phosphorus

Preservative	Concentration	Amount	Ampoule Cat #	10mL Vialservative	QTY/CASE
Sulfuric Acid H ₂ SO ₄	96%	0.5 mL	ACS-.5	SVCS-.5	24
	96%	1 mL	ACS-1	SVCS-1	24
	48%	1 mL	ACS-1-1	SVCS-1-1	24
	24%	1 mL	ACS-1-3	SVCS-1-3	24
	96%	2 mL	ACS-2	SVCS-2	24
	48%	4 mL	ACS-4-1	SVCS-4-1	24
	96%	5 mL	ACS-5	SVCS-5	24
	48%	5 mL	ACS-5-1	SVCS-5-1	24
	96%	10 mL	ACS-10	SVCS-10	24
	48%	10 mL	ACS-10-1	SVCS-10-1	24

**Sulfuric
Acid H₂SO₄**

CHEMICAL PRESERVATIVES

Our preservatives are chemical solutions for the preservation of environmental samples.

Each unit is color-coded and labeled to minimize error in field use.

Each preservative is also offered with full QA/QC and written certification of purity.

These may be ordered by placing a "Q" suffix with the catalog number. If the amount and ratio of your choice of preservatives is not listed, we will custom mix to your specifications.

All preservatives are shipped in compliance with 49CFR 173.4 (Small Quantities) with M.S.D.S. enclosed.

NITRIC ACID PRESERVATIVE

- Application: Stabilizes samples to be analyzed for metals

NOTE: Nitric acid preservatives cannot be shipped by air

Preservative	Concentration	Amount	Ampoule Cat #	Vialservative Cat #	QTY/CASE
Nitric Acid HNO ₃	70%	0.5 mL	ACN-.5	SVCN-5	24
	35%	0.5 mL	ACN-.5-1	SVCN-.5-1	24
	70%	1 mL	ACN-1	SVCN-1	24
	70%	2 mL	ACN-2	SVCN-2	24
	35%	2 mL	ACN-2-1	SVCN-2-1	24
	70%	5 mL	ACN-5	SVCN-5	24
	35%	5 mL	ACN-5-1	SVCN-5-1	24
	70%	10 mL	ACN-10	SVCN-10	24
	35%	10 mL	ACN-10-1	SVCN-10-1	24

Nitric Acid
HNO₃

HYDROCHLORIC ACID PRESERVATIVE

- Application: Stabilizes samples to be analyzed for organics

Preservative	Concentration	Amount	Ampoule Cat #	Vialservative Cat #	QTY/CASE
Hydrochloric Acid HCl	18%	0.5 mL	ACH-.5-1	SVCH-.5-1	24
	37%	1 mL	ACH-1	SVCH-1	24
	18%	1 mL	ACH-1-1	SVCH-1-1	24
	37%	2 mL	ACH-2	SVCH-2	24
	18%	2 mL	ACH-2-1	SVCH-2-1	24
	37%	5 mL	ACH-5	SVCH-5	24
	18%	5 mL	ACH-5-1	SVCH-5-1	24
	37%	10 mL	ACH-10	SVCH-10	24

Hydrochloric
Acid
HCl

SODIUM THIOSULFATE

- Application: Removes residual chlorine from samples

Preservative	Concentration	Amount	Ampoule Cat #	Vialservative Cat #	QTY/CASE
Sodium Thiosulfate Na ₂ S ₂ O ₃	0.008%	1 mL	AST-1	SVST-1	24
	0.008%	2 mL	AST-2	SVST-2	24
	0.008%	5 mL	AST-5	SVST-5	24
	0.008%	10 mL	AST-10	SVST-10	24

Sodium
Thiosulfate
Na₂S₂O₃

CHEMICAL PRESERVATIVES

Our preservatives are chemical solutions for the preservation of environmental samples.

Each unit is color-coded and labeled to minimize error in field use.

Each preservative is also offered with full QA/QC and written certification of purity.

These may be ordered by placing a "Q" suffix with the catalog number. If the amount and ratio of your choice of preservative is not listed, we will custom mix to your specification.

All preservatives are shipped in compliance with 49CFR 173.4 (Small Quantities) with M.S.D.S. enclosed.

ZINC ACETATE

- Application: Stabilizes samples to be analyzed for sulfide

Preservative	Concentration	Amount	Ampoule Cat #	Vialservative Cat #	QTY/CASE
Zinc Acetate	2 parts 10N	1 mL	AZS-1	SVZS-1	24
NaOH-Zn	NaOH/1part	2 mL	AZS-2	SVZS-2	24
(C ₂ H ₃ O ₄) ₂	2N Zinc	5 mL	AZS-5	SVZS-5	24
	Acetate	10 mL	AZS-10	SVZS-10	24

**Zinc Acetate
NaOH-Zn
(C₂H₃O₄)₂**

SODIUM HYDROXIDE

- Application: Stabilizes samples to be analyzed for cyanide

Preservative	Concentration	Amount	Ampoule Cat #	Vialservative Cat #	QTY/CASE
Sodium Hydroxide	10 Normal	1 mL	ASH-1	SVSH-1	24
NaOH	10 Normal	2 mL	ASH-2	SVSH-2	24
	10 Normal	5 mL	ASH-5	SVSH-5	24
	10 Normal	10 mL	ASH-10	SVSH-10	24

**Sodium Hydroxide
NaOH**

NITRIC ACID/POTASSIUM DICHROMATE

- Application: Stabilizes samples to be analyzed for mercury

Preservative	Concentration	Amount	Ampoule Cat #	Vialservative Cat #	QTY/CASE
Nitric Acid/ Potassium Dichromate	10g/L HNO ₃	1 mL	APD-1	SVPD-1	24
	10g/L HNO ₃	2 mL	APD-2	SVPD-2	24
	10g/L HNO ₃	5 mL	APD-5	SVPD-5	24
HNO ₃ K ₂ Cr ₂ O ₇	10g/L HNO ₃	10 mL	APD-10	SVPD-10	24

**Nitric Acid/
Potassium
Dichromate
HNO₃
K₂Cr₂O₇**

CHEMICAL PRESERVATIVES

Our preservatives are chemical solutions for the preservation of environmental samples.

Each unit is color-coded and labeled to minimize error in field use.

Each preservative is also offered with full QA/QC and written certification of purity.

These may be ordered by placing a "Q" suffix with the catalog number. If the amount and ratio of your choice of preservatives is not listed, we will custom mix to your specifications.

All preservatives are shipped in compliance with 49CFR 173.4 (Small Quantities) with M.S.D.S. enclosed.

MONOCHLORACETIC ACID POTASSIUM ACETATE BUFFER

Application: Stabilizes samples to be analyzed for N-methylcarbamates

Preservative	Concentration	Amount	Ampoule Cat #	Vialservative Cat #	QTY/CASE
Monochloroacetic Acid Potassium	65%	1 mL	MCA-1	SVCA-1	24
Acetate Buffer	65%	2 mL	MCA-2	SVCA-2	24
$\text{CH}_2\text{ClCO}_2\text{H}/\text{CH}_3\text{CO}_2\text{K}$	65%	5 mL	MCA-5	SVCA-5	24
	65%	10 mL	MCA-10	SVCA-10	24

Monochloroacetic Acid Potassium Acetate Buffer
 $\text{CH}_2\text{ClCO}_2\text{H}/\text{CH}_3\text{CO}_2\text{K}$



PRE-PRINTED LABELS

- Color-coded labels provide positive identification of preservatives
- Labels are self-adhesive and moisture resistant

CAT #	CHEMICAL PRESERVATIVE	LABEL COLOR	QTY/ROLL
ACS-LAB	Sulfuric Acid (H_2SO_4)	YELLOW	1000
ACN-LAB	Nitric Acid (HNO_3)	ORANGE	1000
ACH-LAB	Hydrochloric Acid (HCl)	BLUE	1000
ASH-LAB	Sodium Hydroxide (NaOH)	WHITE	1000
AST-LAB	Sodium Thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3$)	WHITE	1000
AZS-LAB	Zinc Acetate NaOH-Zn ($\text{C}_2\text{H}_3\text{O}_4$) ₂	WHITE	1000
MCA-LAB	Monochloroacetic Acid Potassium Acetate Buffer ($\text{CH}_2\text{ClCO}_2\text{H}/\text{CH}_3\text{CO}_2\text{K}$)	GREEN	1000
APD-LAB	Nitric Acid/Potassium Dichromate ($\text{HNO}_3/\text{K}_2\text{Cr}_2\text{O}_7$)	RED	1000

CHEMICALLY PRESERVED CONTAINERS

EP PRESERVED™ CONTAINERS

- Chemical Preservation has become popular in the environmental sampling field. Since 1990, we have provided this service with our EP Preserved™ Containers to simplify field preservation.
- Level 1 products include a Certificate of Analysis for the container and the added reagent.
- Sometimes it may be confusing in deciding the amount of preservative to add to your containers. Although we can custom fill to your request, a list of our most common EP Preserved™ Containers may prove helpful.



Application	CAT #	Sample Capacity	Reagent	Preservative Amount	Cross Ref #	QTY/CASE
Volatile Organics	PP140-40C.2HA	40 mL	1:1 Hydrochloric Acid Solution	0.2 mL	140-40C	72
	PP140-40CEP.2HA	40 mL		0.2 mL	140-40C/EP	72
	PP141-40A.2HA	40 mL		0.2 mL	141-40A	72
	PP141-40AEP.2HA	40 mL		0.2 mL	141-40A/EP	72
	PP140-40CDB.2HA	40 mL		0.2 mL	140-40C/DB	144
	PP141-40ADB.2HA	40 mL		0.2 mL	141-40A/DB	144
	PP113-500A/3HA	500 mL		3.0 mL	113-500A	12
	PP112-01A/5HA	1L		5.0 mL	112-01A	12
Metals	PP156-125W/.5NA	125 mL	1:1 Nitric Acid Solution	0.5 mL	156-125W	48
	PP156-125WN/.5NA	125 mL		0.5 mL	156-125W/N	48
	PP157-250W/1NA	250 mL		1.0 mL	157-250W	24
	PP157-250WN/1NA	250 mL		1.0 mL	157-250W/N	24
	PP151-500W/1SH	500 mL		1.0 mL	151-500W	24
	PP151-500WN/1SH	500 mL		1.0 mL	151-500W/N	24
	PP150-01W/5NA	1L		5.0 mL	150-01W	12
	PP150-01WN/5NA	1L		5.0 mL	150-01W/N	12
Nitrate/Nitrite, Chemical Oxygen Demand, Oil & Grease/TPH	PP114-250A/.5SA	250 mL	1:1 Sulfuric Acid Solution	0.5 mL	114-250A	12
	PP112-01A/5SA	1L		5.0 mL	112-01A	12
	PP123-32A/5SA	1L	10N	5.0 mL	123-32A	12
Cyanides	PP157-250W/1SH	250 mL	Sodium Hydroxide Solution	1.0 mL	157-250W	24
	PP157-250WN/1SH	250 mL		1.0 mL	157-250W/N	24
	PP151-500W/1SH	500 mL		1.0 mL	151-500W	24
	PP151-500WN/1SH	500 mL		1.0 mL	151-500W/N	24

VOC FIELD SAMPLING VIALS/FIELD KITS

RECOMMENDED FOR HIGH AND LOW LEVEL VOC 5030/5035 SAMPLING.

VOC FIELD SAMPLING VIALS

We have addressed the needs of each state's particular method of testing for Volatile Organic Compounds (VOC's), whether it is the Environmental Protection Agency (EPA) SW846 Method 5035 or more traditional methods. We offer a complete line of supplies, including tare-weighted vials and soil jars needed in the soil retrieval process.

CAT #	DESCRIPTION	TARE WEIGHED	Sodium BISULFATE	METHANOL	SPIN BAR	QTY/CASE
PP140-40CEPSBTW	40 mL Clear Vial	Yes	Yes/5 mL	No	No	72
PP141-40AEPSBTB	40 mL Amber Vial	Yes	Yes/5 mL	No	Yes	72
PP140-40CEPSBTB	40 mL Clear Vial	Yes	Yes/5 mL	No	Yes	72
PP140-40CEPPTW	40 mL Clear Vial	Yes	No	Yes/10 mL	No	72
PP140-40CEPPTB	40 mL Clear Vial	Yes	No	Yes/10 mL	Yes	72
P140-40CEPPTW	40 mL Clear Vial	Yes	No	Yes/5 mL	No	72
P140-40CEPPTB	40 mL Clear Vial	Yes	No	Yes/5 mL	Yes	72



WATER/WASTEWATER COLLECTION/TEST VESSELS

COLIFORM WATER TEST SAMPLE CONTAINER WITH FLIP-TOP

This patented, polypropylene container automatically de-chlorinates your sample for Total or Fecal Coliform bacteria testing. The one-piece container is pre-sterilized, disposable and comes with a 100mg tablet of sodium thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3$) for de-chlorination. It is easy to use with the 100 mL fill line ($\pm 2.5\%$) that meets EPA tolerance requirements. Our vial features a "Lock and Seal" lid. The guaranteed airtight lid and locking arrow ensures that sterility has not been compromised prior to opening. The closure latching device protects the sample against accidental opening. The custody tie, when used in conjunction with the latch, serves as a custody seal, thus assuring sample integrity. Vials are available without the sodium thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3$) tablet for samples obtained from non-chlorinated sources. Standard sterile flip-top vials are available in various sizes, styles, and colors.



CAT #	DESCRIPTION	QTY/CASE
P156-4BKT	120 mL Polypropylene with Tablet	100
156-4BKT	120 mL Polypropylene without Tablet	100

STERI-BOTTLES FOR COLIFORM SAMPLING

- Available in 120 mL and 150 mL polystyrene
- 38mm leak proof screw cap
- Sterile until opened for sampling
- Bottles are optically clear and are non-fluorescent
- May be ordered with or without sodium thiosulfate
- May be ordered with or without tamper evident seals
- Meets EPA requirement for Bact-T sampling
- Colilert™ collection/test vessel
- Various sizes available in polypropylene and polyethylene



CAT #	DESCRIPTION	QTY/CASE
P156-150ST	150 mL Polystyrene with Tablet, 50mg	342
P156-120ST	120 mL Polystyrene with Tablet, 50mg	200
156-120ST	120 mL Polystyrene without Tablet	200
P156-250PE	250 mL Polyethylene with Tablet, 100mg	228
156-250PE	250 mL Polyethylene without Tablet	228
P156-120PP	120 mL Polypropylene with Tablet, 50mg	200
156-120PP	120 mL Polypropylene without Tablet	200

GAS SAMPLING BAGS

GAS SAMPLING BAGS

We custom fabricate gas sampling bags to your specification.

Call our Customer Service Team for ordering information.

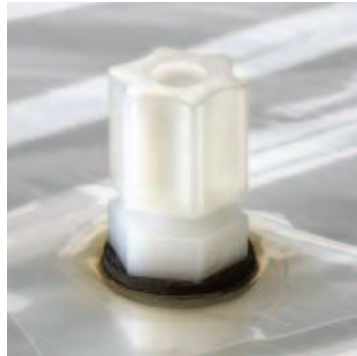
Bag materials and fitting options include:

- Transparent Kynar®: Available in 3 mil material (any size up to 180" x 180")
- Black Kynar: Developed for light-sensitive applications
- Krinkle Kynar: Developed to ensure maximum evacuation
- Fluoropolymer available in FEP®, PFA®, and Tefzel®
- Saran gas sampling bags: (2mil) Available from 0.5L capacity (6 X 6") up to 96L Capacity (24" X 48")
- Type of Fitting(s): Number of fittings and location, are customer specified (see photos below)

HBL, Halkey Roberts, On/Off Valve



JN4, 1/4" Nylon Septum fitting



ST6, Teflon Septum Fitting



TN4, Tube Septum, Nylon



UK4, On/Off Septum, Kynar Dual Valve



Contact Greyhound to provide your requirements.

ACCESSORIES

ACCESSORIES

ENVIRONMENTAL SAMPLING GUIDE

- Revised and expanded water/wastewater and solid waste field sampling guide in a pocket size slide chart form
- Provides planning, buying and sampling personnel with a cross reference of the parameter, sample volume, preservative, holding time, and EPA recommended pre-cleaned sample container (Revision 06/2004)

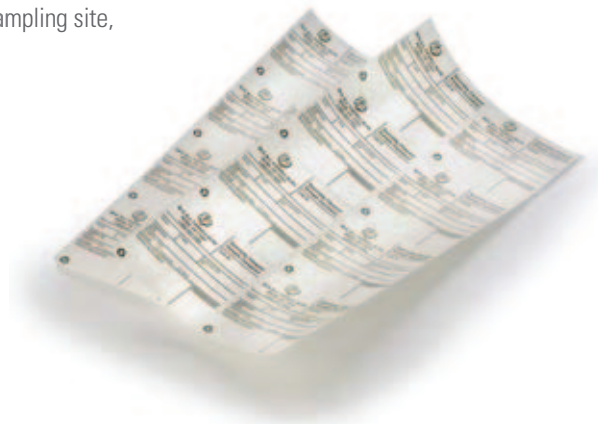


CAT #	DESCRIPTION	QTY/CASE
SG-003	Environmental Sampling Guide	25

CONTAINER LABELS

- Moisture resistant polypropylene label for sample containers provides information for identification of each sample
- The label includes areas for information on date, time, sample collector, sampling site, sample type, tests required, and preservatives used

CAT #	DESCRIPTION - QTY	SIZE
CL-002S/S	8 Labels Per Sheet-13 Sheets Per Pack	1-1/8" x 6-1/2"
CL-003/S	12 Labels Per Sheet-10 Sheets Per Pack	2-1/2" x 2-1/2"
CL-003/5/PK	12 Labels Per Sheet-2000 Sheets	2-1/2" x 2-1/2"



CUSTODY SEALS

- Custody Seal guarantees sample integrity
- The seal fits over vial cap or container closure to ensure integrity during transport
- Seal includes space for the sampler's name and data

CAT #	DESCRIPTION - QTY	SIZE
CS-001RL	1000 Polypropylene Seals Per Roll	1" x 6-1/2"

CUSTODY	
Person Collecting Sample _____ (Signature)	Sample No. _____
Date Collected _____	Time Collected _____

Critical Environment Products



EP SCIENTIFIC CLEAN PROCESS CONTAINERS AND SERVICES FOR CRITICAL ENVIRONMENTS

CLASS 100/10 CLEANING SERVICES

FOR BIOTECH/PHARMACEUTICAL AND SEMICONDUCTOR APPLICATIONS

We have the flexibility to meet your cleaning requirements, whether your cleaning needs are for high volumes or smaller quantities. We have the capability to clean clear/amber glass or plastic containers, as well as closures or other component parts. Send us your containers and closures, or purchase from our extensive line of standard and custom products. We can process containers from 100 µL to 20L. All cleaning services and packaging can be done in our certified class 100/10 cleanroom with full traceability.

EP SCIENTIFIC PROCESSES AVAILABLE FOR STANDARD AND CUSTOM CONTAINERS INCLUDE

LOW PARTICLE CLEANING:

Our Low Particle Processing is designed for use in semiconductor applications, yet exceeds the particle requirements of USP <788>. Containers and closures are cleaned in proprietary HEPA filtered washing/drying equipment and clean-packaged in HEPA-filtered workstations located inside our class 100/10 cleanrooms. Certificate of Analysis or Cleaning Certification are available with each lot.

DEPYROGENATION

Endotoxin-free containers are designed for use in packaging when contents will be terminally sterilized or in lab environments where endotoxin content must be carefully limited or eliminated. Our process has been validated. Containers are cleaned in proprietary HEPA filtered washing equipment with endotoxin-free water, depyrogenated at 250° C, and clean-packaged in HEPA filtered workstations located inside our class 100/10 cleanrooms. Depyrogenated products are available with Certificate of Analysis or Cleaning Certification with each lot.

CHEMICAL CLEANING FOR TRACE ANALYSIS

Your choice of a combination of several different cleaning methods developed for removal of trace inorganic, trace organic, volatile organic, or total organic carbon residues. These methods provide assurance that your packaging or analytical results are free from contaminants. Available with cleanroom packaging or standard packaging, Certificate of Analysis or Cleaning Certification. Minimum quantities may be required.

CLEANING AND CERTIFICATION SERVICES ARE AVAILABLE FOR MANY PARAMETERS INCLUDING:

- Trace Inorganics (Metals)
- Trace Volatile Organic Compounds
- Particle Counting
- Trace Semivolatile Organic Compounds
- Total Organic Carbon
- Trace Pesticides/Herbicides

Call Greyhound on: **(+44) 0 151 649 4000** and ask our Technical Support Team for more details or complete the custom cleaning specification sheet located on page 38.

CLEAN PROCESS CONTAINERS FOR CRITICAL ENVIRONMENTS

CLASS 100/10 LOW PARTICLE CONTAINERS:

All low particle containers are cleaned within our class 100/10 cleanroom. Particles from cardboard packaging and manufacturing processes are virtually eliminated. Containers are cleanroom bagged and ready to go into your cleanroom with no additional preparation. A Certificate of Analysis is included.

PARTICLE-CERTIFIED GLASS CONTAINERS:

Protect the quality of your products or laboratory samples by using our class 100/10 containers which are tested and certified to meet the low particle criteria of group L as described in the table on page 39. The containers are assembled to contain as few as 5 particles per milliliter > 0.5 microns. Assembled with low-shedding polypropylene caps with chemically inert PTFE faced liners that do not contain adhesives. Both clear and amber glass products are available.



CAT #	DESCRIPTION	CAPACITY	QTY/CASE
111-04A/LP*	Amber jug, 38-430 finish	4L	4
111-04A/M/LP*	Amber jug, 38-430 finish; sodium and potassium certified,<100ppb	4L	4
112-01A/LP*	Amber bottle, 33-430 finish	1L	12
113-500A/LP	Amber bottle, 28-400 finish	500 mL	12
114-250A/LP	Amber bottle, 24-414 finish	250 mL	12
114-125A/LP	Amber bottle, 24-414 finish	125 mL	12
114-060A/LP	Amber bottle, 20-400 finish	60 mL	24
130-005/LP	Amber wide mouth jar,	15 mL	57
114-250C/LP	Clear bottle, 24-414 finish	250 mL	24
114-125CT/LP	Clear bottle, 24-414 finish	125 mL	12

**Suitable for hazardous shipping in conjunction with combination packaging.*

NON-STANDARD CONTAINERS MAY BE CUSTOM CLEANED IF YOU CANNOT FIND THE ONE YOU NEED LISTED ABOVE. CALL OUR SALES OR TECHNICAL SUPPORT TEAM ON: (+44) 0 151 649 4000 FOR A QUOTE.

CLEAN PROCESS CONTAINERS AND SERVICES FOR CRITICAL ENVIRONMENTS

PARTICLE-CERTIFIED HDPE CONTAINERS

Protect the quality of your product or high purity samples. Consistent quality and reliability are guaranteed when you use EP Scientific class 100/10 cleaned bottles. Narrow mouth HDPE bottles with polypropylene caps are leak-proof and suitable for use in sampling packaging and may be used with combination packaging for hazardous shipping. Bottles are double-bagged and ready to take into your cleanroom with no extra preparation. Optional quality control documentation includes aluminum, calcium, copper, iron, potassium, magnesium, manganese, sodium, and zinc at less than 10ppb. A Certificate of Analysis is included with each lot.

CAT #	DESCRIPTION	CAP SIZE	mL/oz	QTY/CASE
150-01W/N/LP	Natural HDPE	38-430	1000/32	12
157-250W/N/LP	Natural HDPE	24-415	250/8	24
156-125W/N/LP	Natural HDPE	24-415	125/4	24



PARTICLE-CERTIFIED FEP FLUOROPOLYMER CONTAINERS

FEP fluoropolymer offers the best solution for long-term storage resistance to a wide range of chemicals.

An optional Certificate of Analysis includes aluminum, copper, lead, zinc, calcium, iron, potassium and sodium analysis at less than 1 ppb, per your request.



CAT #	DESCRIPTION	CAP SIZE	mL/oz	QTY/CASE
FEP125NM/LP	Narrow Mouth Bottle FEP Polymer	24-415	125/4	4
FEP250NM/LP	Narrow Mouth Bottle FEP Polymer	24-415	250/8	4
FEP500NM/LP	Narrow Mouth Bottle FEP Polymer	28-415	500/16	2
FEP01KNM/LP	Narrow Mouth Bottle FEP Polymer	33-43	1000/32	2

CLEAN PROCESS CONTAINERS AND SERVICES FOR CRITICAL ENVIRONMENTS

TOTAL ORGANIC CARBON (TOC) CERTIFIED VIALS

We offer the only low-level certified vials in the market for Total Organic Carbon testing and sampling. Major TOC instrument manufacturers use and recommend our vials. We offer several sizes of containers including the popular 40 mL autosampler vials cleaned, certified, and ready to use. Each lot of vials is tested and certified to contribute < 10ppb or < 20 ppb TOC as background. A Certificate of Analysis is included.

Applications:

- USP Method 643 Testing
- Off-line and grab sampling of high purity water
- 40 mL vials fit most automated TOC instruments
- Low background is perfect for preparation and storage of standards
- Cleaning validation is simplified and costs are reduced by using the TOC method of testing
- Our vials are ideal for this sensitive application.



Certified TOC Containers

CAT #	DESCRIPTION	CAPACITY	QTY/CASE	TOC (ppb)
40C-TOC	Clear Vial with Cap Cover, Open Top Cap	40 mL	72	<20
40C-TOC/DB	Clear Vial with Cap Cover, Open Top Cap	40 mL	144	<20
40C-TOC/DB/LL	Clear Vial with Cap Cover, Open Top Cap	40 mL	144	<10
40C-TOC/LL	Clear Vial with Cap Cover, Open Top Cap	40 mL	72	<10
40A-TOC/DB/LL	Amber Vial with Cap Cover, Open Top Cap	40 mL	144	<10
1000A/TOC	Amber Boston Round with PTFE-Lined Cap	1L	12	<10
S114-250C/TOC	Clear Boston Round with Open Top Cap	250 mL	24	<20
S114-250A/TOC	Amber Boston Round with Open Top Cap	250 mL	12	<20
S114-125A/TOC	Amber Boston Round with PTFE-Lined Cap	125 mL	12	<20
S114-250C/CT/TOC	Clear Boston Round with PTFE Lined Cap	250 mL	24	<20
SCT-18100/TOC	Culture Tube 18 x 100mm, Open Top	17 mL	200	<20
SCT-25150/TOC	Culture Tube 25 x 150mm, Open Top	60 mL	144	<20
CT18-TOC	Culture Tube 16 x 125mm	18 mL	255	<20
CT18-TOC/LL	Culture Tube 16 x 125mm	18 mL	255	<10

TOC Containers

- Certificate Of Cleaning Only

CAT #	DESCRIPTION	Capacity	QTY/CASE
3115-OTWS-2	Polysulfone Tube, Open Top Cap, Cleaned	30 mL	100
20-400/WS-2	20-400 G.P.I. Open Top Cap for Polysulfone Tube, Cleaned	NA	100

CLEAN PROCESS CONTAINERS AND SERVICES FOR CRITICAL ENVIRONMENTS

TOC WATER AND OTHER SPECIALTY WATERS

High purity specialty water exceeds 17 MegaOhm resistivity with low organic and inorganic impurities at the time of packaging.

Processing includes reverse osmosis, activated carbon and ultraviolet TOC reduction. Specialty waters are packaged in pre-cleaned amber glass containers.

Other high-grade waters available by special request include

- Low Particle Water
- Reagent-Grade Water
- Pyrogen-Free™ Water

Our specialty waters are filtered to 0.1 micron through hydrophobic membrane filters and certified to contain < 50 ppb Total Organic Carbon

Applications:

- Sample and standards dilution
- Lab blank determination
- Equipment rinsing



TOC Water

CAT #	DESCRIPTION	CAPACITY	QTY/CASE
112-01A/CTOC	Amber Boston Round	1L	12
111-04A/CTOC	Amber Jug	4L	4

We offer over 950 standard EP Scientific products

See pages 35-38 of this catalog for a wide variety of custom processing services that can be applied to our containers or yours.

The Custom Cleaning Spec Sheet makes it easy to get the product that you need!

CLEAN PROCESS CONTAINERS AND SERVICES FOR CRITICAL ENVIRONMENTS

DEPYROGENATED GLASS/ DEPYROGENATION SERVICE

We provide glass vials and other containers in a variety of sizes that have been specially prepared to meet endotoxin levels of less than 0.06 EU/mL. Depyrogenated vials and containers may also be requested with an additional low particle certification.

We can depyrogenate any glass as a service with our validated process. Cleaning and packaging is performed in a class 100/10 cleanroom. A Certificate of Analysis is included with each lot.

Applications:

- Packaging and storing articles that will be terminally sterilized
- Storage of laboratory reagents and medias
- Sample storage
- Water sampling

These containers are sold with a polypropylene cap with PTFE liner

CAT #	DESCRIPTION	CAPACITY	QTY/CASE
117-4L/PF	Clear Glass Wide Mouth Jar	4L	4
117-2L/PF	Clear Glass Wide Mouth Jar	2L	6
123-32A/PF	Amber Glass Wide Mouth	1000 mL	12
123-80A/PF	Amber Glass Wide Mouth	2.5 L	4
130-02C/PF	Clear Wide Mouth Jar	60 mL	24
130-04C/PF	Clear Wide Mouth Jar	125 mL	24
132-16C/PF	Clear Wide Mouth Jar	500 mL	12
C20-02A/PF	Amber Wide Mouth Jar	60 mL	24
C20-04A/PF	Amber Wide Mouth Jar	125 mL	12

STERILE EMPTY VIALS

- Certificates of Sterility and Pyrogen Test Included
- Certified depyrogenated and sterile, these vials are available in sizes from 1 mL to 100 mL.
- Sterile vials are Type I borosilicate, assembled with butyl stoppers and aluminum seals.

Applications:

Suitable for a number of uses where an aseptic protocol is required

CAT #	DESCRIPTION	CAPACITY	QTY/CASE
ST1-11	Clear with 11mm Finish	1 mL	100
ST2-13	Clear with 13mm Finish	2 mL	100
ST5-13	Clear with 13mm Finish	5 mL	50
ST5-20	Clear with 20mm Finish	5 mL	50
ST10-20	Clear with 20mm Finish	10 mL	50
ST20-20	Clear with 20mm Finish	20 mL	50
ST30-20	Clear with 20mm Finish	30 mL	50
ST50-20	Clear with 20mm Finish	50 mL	50
ST100-20	Clear with 20mm Finish	100 mL	50

RNASE/DNASE-FREE CERTIFIED PRODUCTS FROM EP SCIENTIFIC

We have expanded our critical environment offerings to include RNase and DNase-Free Certified Products. Glassware processing, packaging and certification must be proven nuclease-free when working with DNA or RNA to ensure critical and adequate recoveries. Sterilization methods such as gamma irradiation and autoclaving do not remove RNase, DNase and pyrogens. Nucleases are omnipresent contaminants in the laboratory environment today, and while pyrogens are still a major concern for molecular biologists in the pharmaceutical and medical research fields, the addition of nuclease-free products that are coupled with Pyrogen-Free™ certification satisfies the most stringent demands of life science research.

The addition of nuclease-free product offerings will improve test methods and contamination control in work areas. Common sources of DNase and RNase contamination are: human contact; oils from the face, hands, arms, and hair; and bacteria from non-sterile environments. RNase/DNase-Free Certified Products provide all the supporting documentation you'll need for each lot tested to ensure the integrity of your products.

Call Greyhound on: **(+44) 0 151 649 4000** and ask our Technical Support Team for more information about these products.



EP SCIENTIFIC SURFACE MODIFICATION PROCESSING

SURFACE MODIFICATION PROCESSING For Biotech/Pharmaceutical and Analytical Applications

Silanization/siliconization may play an important role in preserving the integrity of certain materials or extracts stored in glass containers. Surface modification eliminates active sites on the surfaces of borosilicate glass that are inherent in the glass structure. It also helps to avoid alkalinization of contents which may occur as carbonates leach from the glass with normal "weathering". All sizes of glassware, including vial inserts, may be accommodated. We can provide the treatments as an added service with our standard containers or as a customized application to your product.

SILANIZATION-VAPOR DEPOSITION:

Silanization is an environmentally friendly method of providing surface modification. A proprietary methylsilylating agent is introduced by vapor phase deposition onto the surface of the glassware. This procedure works well for treating vials and inserts for use in analytical methodologies. A Certificate of Conformance is provided for the treated product.

SILICONIZATION-AQUEOUS PHASE:

Available only as a service at this time, glass or plasticware is coated with a medical-grade silicone emulsion. The result of this treatment is a barrier coating which provides lubricity and protection against alkalinization. This treatment works well with serum vials and for pH sensitive storage applications. A Certificate of Conformance is provided for the treated product.

SILANE TREATED VIALS & TEST TUBES

We offer a line of ready-to-use silanized vials, culture tubes, and autosampler inserts. Save valuable personnel time and minimize waste costs by using our silanized products when performing quantitative analysis or storing materials. A methylsilylating agent is introduced by vapor phase deposition onto the surface of the disposable glassware. The silylating agent reacts with active groups on the surface of the glass effectively tying up these sites so they are less reactive. This treatment inhibits materials from adhering onto the surface of the container, allowing for maximum recovery of trace analytes. A Certificate of Conformance is included.



EP SCIENTIFIC SURFACE MODIFICATION PROCESSING

EP SCIENTIFIC SILANIZED PRODUCTS

Applications:

- Trace organic analysis
- Storage of materials prone to adhering to glass
- Extraction glassware



Silanized Screw Thread Vials

CAT # SILANIZED	DESCRIPTION	SIZE O.D. X HEIGHT mm	GPI THREAD FINISH	QTY/CASE
SAA-SV2-2	Amber	12 X 32	8-425	100
SAA-SV2B-2	Amber	12 X 32	10-425	100
SCA-SV2-2	Clear	12 X 32	8-425	100
SCA-SV2B-2	Clear	12 X 32	10-425	100
SAA-SV4-2	Amber	15 X 45	13-425	100
SCA-SV4-2	Clear	15 X 45	13-425	100



Culture Tubes, Disposable

Type 1 borosilicate glass. 1000 per case, 250 per inner pack

CAT # SILANIZED	CAPACITY	SIZE O.D. X HEIGHT mm	QTY/CASE
CTS-1275	6 mL	12 X 75	1000
CTS-13100	10 mL	13 X 100	1000
STT-13100-S*	10 mL	13 X 100	1000
STT-16100-S*	15 mL	16 X 100	1000
CTS-16100	15 mL	16 X 100	1000
CTS-16125	19 mL	16 X 125	1000

*Denotes Screw Thread Culture Tube



NATIONAL SCIENTIFIC MASS SPEC CERTIFIED VIALS

Industry's *first* and *only* pre-cleaned, low particle, low background chromatography vial



The *only* vial clean enough for every high sensitivity application

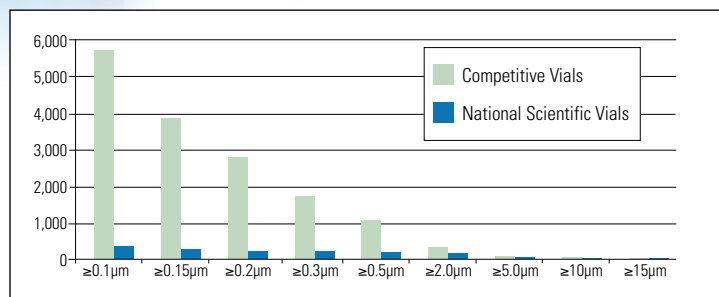
- Pre-cleaned vials provide unmatched consistency
- Pre-cleaned vial packaging protects the product integrity
- High purity closures packed in air-tight re-closeable container
- Tested and certified for 13 critical physical characteristics affecting vial performance

For your **FREE** sample pack, visit www.nationalscientific.com/cleanvials

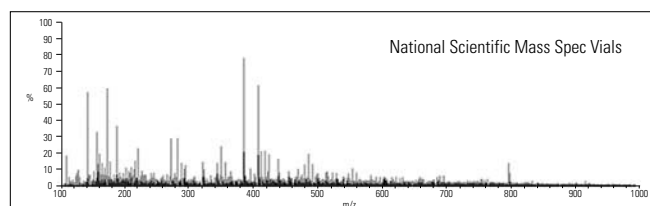
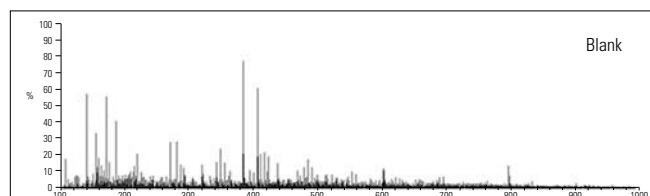


www.nationalscientific.com
800-332-3331 • 865-717-1986 (international)

Typical Cumulative Particle Counts



LC/MS Background Scan



Conditions:
Positive ESI
100 to 1000m/z
1.51e5

CUSTOM CLEAN CAPABILITIES FOR CRITICAL ENVIRONMENTS

We have the flexibility to meet your cleaning requirements, whether your cleaning needs are for high volumes or smaller quantities. We have the capability to clean glass or amber containers, as well as closures or other component parts. All cleaning and packaging services are carried out in our certified class 100/10 cleanroom with full product traceability. We can service containers from 1 mL to 20L. Any of our cleaning methods may be provided as a service for custom cleaning of non-standard containers.

Critical Environment Products and Services Feature

- Flexibility – Small or large quantities with scale up planning
- Full customization – Cleaning, packaging and certification for specific needs
- Cleanroom Facilities – Products handled and packaged in Class 100/10 cleanroom
- Full traceability – Including archival services
- Open-door audit policy

Custom Cleaning Services for Containers from 1 mL to 20L:

■ Low particle cleaning (biotech, pharmaceutical, semiconductor)

- Exceeds the particle requirement of USP 788
- Cleaned in proprietary HEPA-filtered washing/drying equipment and clean-packaged in HEPA-filtered workstations inside Class 100/10 cleanroom
- Glass – Certified to contain as few as 5 particles per mL larger than 0.5 microns
- Plastics – Certified to contain as few as 20 particles per mL larger than 0.3 microns
- Full documentation including Certificate of Analysis

■ WFI (Water for Injection) rinse

- State-of-the-art water purification system
- Produces water that is 4 times below the USP standard for endotoxins and 50 times below the USP water criteria level for TOC

■ Depyrogenation

- Endotoxins levels of less than 0.06 EU/mL (USP standard is 0.25 EU/mL for Water For Injection)
- Depyrogenation service available for any glass container
- Cleaning and packaging performed inside a Class 100 cleanroom
- Certificate of Analysis

■ Silanization

- Two methods of silanization available:
- Vapor phase deposition of methylsilating agent onto the surface of the glassware
- Dip method – 30 min soak using a proprietary reagent
- Deactivates sites on the surface of the glass to allow for maximum recovery of trace analytes
- Certificate of Conformance available if raw product is provided by EP Scientific

■ Siliconization

- Glass or plasticware coated with a FDA medical-grade silicone emulsion.
- Certificate of Conformance available if product is provided by EP Scientific

■ Low Carbon (TOC) vials

- Certified to contain less than or to contribute no more than 10ppb TOC to the sample
- Lot-tested and certified
- Certificate of Analysis included

■ Sterilization methods

- Dry heat
- Gamma irradiation
- Moist heat/autoclave
- Certificate of Analysis included – meets USP criteria
- Meets USP sterilization criteria

Custom Clean Packaging

We process cleaned containers are packaged in a variety of materials selected to maintain the integrity of our process right up to the point of use. The selection of packaging can be affected by the intended use of the product as well as the level of certification provided.

Our standard product packaging options include:

■ Cleanroom bags (polyethylene)

- Non-breathable polyethylene bags manufactured in a Class 10 clean room
- Individual item per bag, multi-units per bag, tray pack shrink-wrapped
- Single, double, or triple bags available
- Heat-sealed or twist-tied

■ Autoclaveable bag

- Breathable Tyvek®/polyethylene pouch
- Manufactured in a Class 10 clean room
- Single, double, or triple bags available

■ Foil-wrap

- Cleanroom grade aluminum foil
- Single, double, or triple layers of foil available

■ Autoclave wrap

- Non-shedding woven polypropylene
- Used for tray pack vials that are steam-sterilized
- Must have at least one heat sealed-autoclave bag over the autoclave wrap
- Single, double, or trip wrap bags available

Technical Information and Custom Services



CUSTOM PRODUCTS AND SERVICES

We take great care to provide our customers with products and services that fully meet their requirements and expectations. Frequently, your needs can be met from our standard product offerings covering more than 950 items. When an application requires customization of one or more of our products and services, our Customer Cleaning Specification Sheet is your best assurance for obtaining the ideal product quickly and easily.

A blank Custom Cleaning Specification Sheet is located on the next page of this catalog and may also be downloaded from the EP Scientific website. The technical pages of this catalog contain detailed information to assist you in selecting from our many available services.

Within this section you will find:

- Custom Cleaning Specification Sheet (page 38)
- Description of EP Scientific processing techniques (page 39-40)
- Process specifications (page 41)
- Certificate of Analysis data (page 42)
- Dimensional data for stock containers (page 43-57)
- Part number to page cross index (page 43-57)

If the information that you require is not included, please contact the Greyhound Technical Support Team on **(+44) 0 151 649 4000** to take advantage of two decades of experience in the processed container industry.



TECHNICAL INFORMATION

Greyhound Chromatography Custom Cleaning Specification

Completion of this form is highly recommended to ensure proper service. Please return this sheet along with any additional special requirements to Greyhound Chromatography and Allied Chemicals: Fax: (+44) 0 151 649 4001 Tel: (+44) 0 151 649 4000

Company:..... Contact:.....
 Address:..... Telephone:.....
 Fax:.....
 Email:.....

Customer sending materials for service only Sales Rep.....Greyhound Provides Materials
 (Notice: All material will be processed and returned including manufacture defects. Multiple raw lots will require additional testing.)

Please Provide Container or Component Information

Manf. and Identification or EP Part # (if known)	Description (size, material, etc.)	Qty.

Use one sheet per item.

Process Required or Requested*

- | | | |
|---|--|--|
| <input type="checkbox"/> Dry Heat Depyrogenation, validated 3-log reduction | <input type="checkbox"/> Particulate cleaning | <input type="checkbox"/> WFI rinse (Containers < 250ml) |
| <input type="checkbox"/> Surface treatment (silanization) | <input type="checkbox"/> Irradiation (glass will discolor after irradiation) | <input type="checkbox"/> USP Purified Rinse (Containers > 250ml) |
| <input type="checkbox"/> Surface treatment (siliconization) | <input type="checkbox"/> Sterile Foil Wrap process | <input type="checkbox"/> Autoclave |
| <input type="checkbox"/> TOC process | <input type="checkbox"/> RNase & DNase Process | <input type="checkbox"/> Other..... |

Packaging Configurations

Cleanroom bags

- Individual unit Multi-unit
 Single Double

- Options: Autoclave bag (single, dbl., triple)
 Foil-wrap #..... Autoclave Wrap x 2

Other packaging configurations: (describe)

Clean polypropylene tray-pack:

- Shrink-wrapped with double bag; standard

Certification Requirements

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> C of A, TOC | <input type="checkbox"/> C of A, Endotoxin | <input type="checkbox"/> C of A, Particles | <input type="checkbox"/> Selected testing by USP Methods |
| <input type="checkbox"/> Certificate of Processing | <input type="checkbox"/> Materials Cert. of Compliance (only if EP provides materials) | <input type="checkbox"/> C of A, RNase and DNase | |
| <input type="checkbox"/> C of Sterility/USP | | | |

Other Tests or special documentation LIST:

Please indicate shipping method required.....

Minimum lead-time for custom product is dependent upon quantity, analytical requirements, and availability of materials. Custom Cleaning Specification Sheet must be signed and dated. Failure to do so may cause your quote to be delayed. All information exchanged between 'Greyhound Chromatography' and the above 'Company' is considered confidential. Greyhound will not be responsible for failure by the customer to request any other requirements not included on this sheet.

Fax to Greyhound Chromatography and Allied Chemicals: (+44) 0 151 649 4001

Submitted by:..... Date:.....

* Some options may not be available for all sizes or container types.

CUSTOM PROCESSING

PROCESS DEFINITIONS

USE TABLE BELOW TO COMPLETE THE CUSTOM CLEANING SPECIFICATION SHEET

Process	Definition	Common Applications	Typical Certifications
Depyrogenation, validated 3-log reduction	The destruction and removal of endotoxins. Endotoxins are fever producing substances commonly found in the cell wall of certain bacteria. Depyrogenated products have reduced endotoxin content by at least 99.9% or 3 logs.	Injectable or parenteral drugs, Lyophilization, Final packaging prior to drug delivery, stability studies, clinical trials	Certificate of Process, Certificate of Analysis (USP 85)
Silanization	Silanized products have been treated to neutralize active sites in glassware. This process allows materials to remain stable and prevents them from reacting with the glass surface. It also prevents the components of the glass from leaching into the samples.	Proteins, assays of blood serum, pharmacological assays of therapeutic drugs	Certificate of Conformance, Certificate of Process
Siliconization	Siliconized products are physically coated with a medical-grade silicone emulsion to prevent sample material from reacting with the glass container.	Proteins, assays of blood serum, pharmacological assays of therapeutic drugs	Certificate of Conformance, Certificate of Process
TOC process	Total organic carbon (TOC) is a measure of the amount of carbon covalently bound in organic molecules in a water sample. EP Scientific TOC vials are cleaned and certified to contain fewer than 10ppb TOC as background.	Validation of water systems, equipment validations, cleaning validations, and monitoring low levels of organic contaminants in numerous applications	Certificate of Analysis -TOC
Particulate Cleaning	We use high-purity 17 Meg-ohm, electronics-grade water filtered to sub-micron levels for the particulate cleaning process. This highly aggressive, low particle water is heated and used for cleaning processes.	Numerous applications in the pharmaceutical, biotech, medical, semiconductor industries, and anywhere cleanrooms or controlled environments are utilized	Certificate of Analysis (USP 788)

PROCESS DEFINITIONS

USE TABLE BELOW TO COMPLETE THE CUSTOM CLEANING SPECIFICATION SHEET

Process	Definition	Common Applications	Typical Certifications
Irradiation	Application of a radiation dose sufficient to destroy all viable forms of life. A radiation dose sufficient to destroy all viable forms of life including bacterial spores, is applied to an acceptable sterility level (SAL). A typical radiation dose is 25-40 kGy, which produces the required SAL of 10 ⁻⁶ . EP Scientific gamma sterilizes glassware, stoppers, seals and certain caps and plastic bottles.	Injectable or parenteral drugs, lyophilization, final packaging prior to drug delivery, stability studies, clinical trials	USP Sterility, Certificate of Process
Sterile Foil-Wrap	Sterile processing is designed to destroy all living organisms. We sterilize glassware via a validated dry-heat, foil-wrap method. Stoppers and seals are sterilized via autoclave methods.	Injectable or parenteral drugs, stability studies, clinical trials	Certificate of Analysis – Endotoxins, USP Sterility, USP Particulates
USP Purified Water and WFI Rinses	We use a state-of-the-art water purification system which far exceeds the USP specifications for TOC, conductivity, bacterial, and endotoxin levels to provide a final product that meets FDA requirements.	Various cleanroom applications in the pharmaceutical, biotech, medical, and semiconductor industries	Certificate of Process
Steam Sterilization	The sterilization involves the application of steam, heat, and pressure to destroy all viable forms of life, including bacterial spores, to an acceptable sterility assurance level (SAL) of 10 ⁻⁶ .	Injectable or parenteral drugs, lyophilization, final packaging prior to drug delivery, stability studies, clinical trials	USP Sterility, Certificate of Process

CERTIFICATIONS

USP Purified Water: Container Sizes >250 mL

**EP Scientific
Purified Water
Used for Final
Rinses**

	USP Specifications	Typical EP Values
TOC	<500 ppb	10-20 ppb
Conductivity	<1.3 μ S/cm	0.06 μ S/cm
Bacteria	100 cfu / mL	0 cfu / 100 mL

USP Water for Injection (WFI): Containers \leq 250 mL

	USP Specifications	Typical EP Values
TOC	<500 ppb	10-20 ppb
Conductivity	<1.3 μ S/cm	0.06 μ S/cm
Bacterial	10 cfu / 100 mL	0 cfu / 100 mL
Endotoxin	<0.25 EU/ mL	<0.06 EU/ mL

Critical Environment Technical Data

PARTICULATES GLASS OR PLASTIC GROUP L		LOW-PARTICLE / METALS COMBINATION (μ g/L) PLASTICS ONLY GROUP E			
COMPOUND	SPEC	COMPOUND	SPEC	COMPOUND	SPEC
Particulates General 1	<5 pcs/mL @ 0.5 μ m	Aluminum	<10	Potassium	<10
Particulates General 2	<10 pcs/mL @ 0.5 μ m	Calcium	<10	Magnesium	<10
Particulates General 3	<20 pcs/mL @ 0.5 μ m	Copper	<10	Manganese	<10
Particulates General 4	<50 pcs/mL @ 0.5 μ m	Iron	<10	Sodium	<10
Particulates General 5	<20 pcs/ml @ 0.3 μ m	Particulates <50pcs/mL @ 0.2 μ m			

TOC GLASS GROUP M	
COMPOUND	SPEC
TOC General 1	<10 ppb
TOC General 2	<20 ppb

ENDOTOXIN GLASS GROUP N	
COMPOUND	SPEC
Endotoxin	< 0.06 EU/mL

VOLATILE ORGANICS

BOTTLE TYPE	B	QA LEVEL	Level 1	LOT NO	B 6045040
DESCRIPTION	40 mL Clear Vial				

VOLATILES QUALITY ASSURANCE

EP Scientific Level 1 products have been tested and found to comply with or to be lower than the EPA detection limits as stated in OSWER Directive # 9240.0-05A "Specifications and Guidance for Contaminant-Free Sample Containers 12/92".

Compound	Quantitation Limit (µg/L)	Compound	Quantitation Limit(µg/L)
Acetone	< 5.0	Ethylbenzene	< 0.5
Acrylonitrile	< 1.0	Hexachlorobutadiene	< 0.5
Benzene	< 0.5	2-Hexanone	< 5.0
Bromobenzene	< 0.5	Iodomethane	< 0.5
Bromochloromethane	< 0.5	Isopropylbenzene	< 0.5
Bromodichloromethane	< 0.5	m+p Xylenes	< 0.5
Bromoform	< 0.5	4-Methyl-2-pentanone	< 5.0
Bromomethane	< 0.5	Methyl tert-butyl ether (MTBE)	< 0.5
2-Butanone	< 5.0	Naphthalene	< 0.5
Carbon Disulfide	< 0.5	n-Butylbenzene	< 0.5
Carbon Tetrachloride	< 0.5	Nitrobenzene	< 0.5
Chlorobenzene	< 0.5	n-Propylbenzene	< 0.5
Chloroethane	< 0.5	o-Xylene	< 0.5
Chloroform	< 0.5	p-Isopropyltoluene	< 0.5
Chloromethane	< 0.5	sec-Butylbenzene	< 0.5
2-Chlorotoluene	< 0.5	Styrene	< 0.5
4-Chlorotoluene	< 0.5	tert-Butylbenzene	< 0.5
cis-1,2-Dichloroethene	< 0.5	Tert-Amyl methyl ether (TAME)	< 3.0
cis-1,3-Dichloropropene	< 0.5	Tert-Butyl alcohol (TBA)	< 2.0
1,2-Dibromo-3-chloropropane (DBCP)	< 0.02	1,1,2,2-Tetrachloroethane	< 0.5
Dibromochloromethane	< 0.5	Tetrachloroethene	< 0.5
1,2-Dibromoethane (EDB)	< 0.01	Toluene	< 0.5
Dibromomethane	< 0.5	trans-1,2-Dichloroethene	< 0.5
1,2-Dichlorobenzene	< 0.5	trans-1,3-Dichloropropene	< 0.5
1,3-Dichlorobenzene	< 0.5	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	< 0.5
1,4-Dichlorobenzene	< 0.5	1,2,3-Trichlorobenzene	< 0.5
Dichlorodifluoromethane (Freon-12)	< 0.5	1,2,4-Trichlorobenzene	< 0.5
1,1-Dichloroethane	< 0.5	1,1,1-Trichloroethane	< 0.5
1,2-Dichloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
1,1-Dichloroethene	< 0.5	Trichloroethene	< 0.5
Dichloromethane	< 0.5	Trichlorofluoromethane	< 0.5
1,2-Dichloropropane	< 0.5	1,2,3-Trichloropropane	< 0.5
1,3-Dichloropropane	< 0.5	1,2,4-Trimethylbenzene	< 0.5
2,2-Dichloropropane	< 0.5	1,3,5-Trimethylbenzene	< 0.5
1,1-Dichloropropene	< 0.5	Vinyl Acetate	< 0.5
Ethyl tert-butyl ether (ETBE)	< 3.0	Vinyl Chloride	< 0.5
Octamethylcyclotetrasiloxane	< 5.0	Decamethylcyclopentasiloxane	< 5.0

In addition to the above analytes, 40 mL and 60 mL vials are certified for:

Compound	Quantitation Limit (µg/L)
Total Organic Carbon	< 600

SPECIFICATIONS

The following tables give an alphabetized listing of all standard EP Scientific products including important dimensional information. For more complete information about any of these products, refer to the catalog page referenced in the last column.

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
1000A/TOC	1L amber boston round TOC <10ppb	12	33-430	PTFE	8.500	3.750	28
100-400TL-3C	White polypropylene cap with PTFE liner	100	100-400	PTFE	n/a	n/a	13
100-400TL-3M	White polypropylene cap with PTFE liner	1000	100-400	PTFE	n/a	n/a	13
110-2L	2L (64 oz) HDPE bleach jug (C)	6	38-400	PE F-217	9.700	4.750	9
110-2L/BPC	2L (64 oz) HDPE bleach jug (bulk, caps attached)	40	38-400	PE F-217	9.700	4.750	9
110-400TL-3C	White polypropylene cap with PTFE liner	100	110-400	PTFE	n/a	n/a	13
110-400TL-3M	White polypropylene cap with PTFE liner	1000	110-400	PTFE	n/a	n/a	13
110-80A	2.5L (80 oz) amber jug (A)	6	38-430	PTFE	12.000	5.250	3
111-04A	4L (128 oz) amber jug (A)	4	38-430	PTFE	13.250	6.250	3
111-04A/CTOC	4L (128 oz) amber jug (A) filled with TOC water	4	38-430	PTFE	13.250	6.250	29
111-04A/LP	4L (128 oz) amber jug (A) low particle	4	38-430	PTFE	13.250	6.250	26
111-04A/M/LP	4L (128 oz) amber jug (A) low particle sodium/potassium certified	4	38-430	PTFE	13.250	6.250	26
111-4L	4L (128 oz) HDPE bleach jug	6	38-430	PE F-217	11.900	6.000	9
111-4L/BPC	4L (128 oz) HDPE bleach jug (bulk, caps attached)	18	38-430	PE F-217	11.900	6.000	9
112-01A	1L (32 oz) amber boston round (A)	12	33-430	PTFE	8.100	3.700	2
112-01A/CTOC	1L (32 oz) amber boston round (A) filled with TOC water	12	33-430	PTFE	8.100	3.700	29
112-01A/LP	1L (32 oz) amber boston round low particle	12	33-430	PTFE	8.100	3.700	26
112-01C	1L (32 oz) clear boston round (A)	12	33-400	PTFE	8.000	3.680	2
113-500A	500 mL (16 oz) amber boston round (A)	12	28-400	PTFE	6.700	3.000	2
113-500A/LP	500 mL (16 oz) amber boston round low particle	12	28-400	PTFE	6.700	3.000	26
113-500C	500 mL (16 oz) clear boston round (A)	12	28-400	PTFE	6.625	3.000	2
114-060A/LP	60 mL (4 oz) amber boston round low particle	12	20-400	Septa	4.375	1.875	26
114-125A/LP	125 mL (4 oz) amber boston round low particle	12	24-414	Septa	4.375	1.875	26
114-125CT/LP	125 mL (4 oz) clear boston round low particle	12	24-414	Septa	4.375	1.875	26
114-250A	250 mL (8 oz) amber boston round (A)	12	24-414	Septa	5.400	2.375	2
114-250A/LP	250 mL (8 oz) amber boston round low particle	12	24-414	Septa	5.400	2.375	26
114-250C	250 mL (8 oz) clear boston round (A)	12	24-414	Septa	5.000	2.375	2
114-250C/LP	250 mL (8 oz) clear boston round low particle	12	24-414	Septa	5.375	2.375	26
115-125A	125 mL (4 oz) amber boston round (A)	12	24-414	Septa	4.600	1.875	2
117-2L	2L (64 oz) clear wide mouth (A)	6	110-400	PTFE	6.300	5.620	4
117-2L/PF	2L (64 oz) clear wide mouth, depyrogenated	6	110-400	PTFE	6.300	5.620	30
117-4L	4L (128 oz) clear wide mouth (A)	4	89-400	PTFE	9.800	6.000	4
117-4L/PF	4L (128 oz) clear wide mouth, depyrogenated	4	89-400	PTFE	9.800	6.000	30
120-02A	60 mL (2 oz) amber wide mouth packer (A)	24	33-400	PTFE	2.900	1.750	5
120-04A	125 mL (4 oz) amber wide mouth packer (A)	12	38-400	PTFE	3.750	2.125	5
120-400TL-3C	White polypropylene cap with PTFE liner	100	120-400	PTFE	n/a	n/a	13
120-400TL-3M	White polypropylene cap with PTFE liner	1000	120-400	PTFE	n/a	n/a	13
121-08A	250 mL (8 oz) amber wide mouth packer (A)	12	45-400	PTFE	4.750	2.500	5
122-16A	500 mL (16 oz) amber wide mouth packer (A)	12	53-400	PTFE	5.800	3.180	5
123-32A	1L (32 oz) amber wide mouth packer (A)	12	53-400	PTFE	7.250	3.870	5
123-32A/PF	1L (32 oz) amber wide mouth packer, depyrogenated	12	53-400	Teflon	7.250	3.870	30
123-40A	1250 mL (40 oz) amber wide mouth packer (A)	24	70-400	PTFE	7.500	4.125	5
123-80A	2.5L (80 oz) amber wide mouth TCLP (A)	4	70-400	PTFE	9.375	5.500	5
123-80A/PF	2.5L (80 oz) amber wide mouth packer, depyrogenated	4	70-400	Teflon	9.375	5.500	30

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
130-005/LP	15 mL (1/2 oz) amber straight side low particle	57	28-400	PTFE	2.000	1.188	26
130-02A	60 mL (2 oz) amber straight side (A)	24	51-400	PTFE	2.313	2.250	5
130-02A/WS	60 mL (2 oz) amber straight side OTWS (A)	24	51-400	Septa	2.313	2.250	5
130-02C	60 mL (2 oz) clear wide mouth (A)	24	53-400	PTFE	1.875	2.250	4
130-02C/PF	60 mL (2 oz) clear wide mouth, depyrogenated	12	53-400	PTFE	1.875	2.250	30
130-02C/WS	60 mL (2 oz) clear wide mouth OTWS (A)	24	53-400	Septa	1.875	2.250	4
130-04A	125 mL (4 oz) amber straight side (A)	24	58-400	PTFE	2.625	2.375	5
130-04A/WS	125 mL (4 oz) amber straight side OTWS (A)	24	58-400	Septa	2.625	2.375	5
130-04C	125 mL (4 oz) clear wide mouth, short (A)	24	58-400	PTFE	2.625	2.375	4
130-04C/PF	125 mL (4 oz) clear wide mouth, short, depyrogenated	12	58-400	PTFE	2.625	2.375	30
130-04C/TL	125 mL (4 oz) clear wide mouth, tall (A)	24	48-400	PTFE	4.000	2.000	4
130-04C/WS	125 mL (4 oz) clear wide mouth, short OTWS (A)	24	58-400	Septa	2.625	2.375	4
131-08A	250 mL (8 oz) amber straight side (A)	24	70-400	PTFE	3.500	2.875	5
131-08A/WS	250 mL (8 oz) amber straight side OTWS (A)	24	70-400	Septa	3.500	2.875	5
131-08C	250 mL (8 oz) clear wide mouth, short (A)	12	70-400	PTFE	3.500	2.875	4
131-08C/TL	250 mL (8 oz) clear wide mouth, tall (A)	12	58-400	PTFE	4.300	2.400	4
132-16C	500 mL (16 oz) clear wide mouth, short (A)	12	89-400	PTFE	3.875	3.500	4
132-16C/PF	500ml (16 oz) clear wide mouth short, depyrogenated	12	89-400	Teflon	3.875	3.500	30
132-16C/TL	500 mL (16 oz) clear wide mouth, tall (A)	12	63-400	PTFE	6.625	2.620	4
133-32C	1L (32 oz) clear wide mouth (A)	12	89-400	PTFE	6.625	3.750	4
139-20A	Premium 20 mL amber vial (B)	72	24-414	Septa	2.250	1.125	7
139-20A/CT	Premium 20 mL amber vial closed top (B)	72	24-414	Septa	2.250	1.125	7
139-20A/EP	20 mL amber vial (B)	72	24-414	Septa	2.250	1.125	6
139-20A/EP/CT	20 mL amber vial closed top (B)	72	24-414	Septa	2.250	1.125	6
139-20C	Premium 20 mL clear vial (B)	72	24-414	Septa	2.250	1.125	7
139-20C/CT	Premium 20 mL clear vial closed top (B)	72	24-414	Septa	2.250	1.125	7
139-20C/EP	20 mL clear vial (B)	72	24-414	Septa	2.250	1.125	6
139-20C/EP/CT	20 mL clear vial closed top (B)	72	24-414	Septa	2.250	1.125	6
140-40C	Premium 40 mL clear vial (B)	72	24-414	Septa	3.750	1.125	7
140-40C/CT	Premium 40 mL clear vial closed top (B)	72	24-414	Septa	3.750	1.125	7
140-40C/DB	40 mL clear vial - double box (B)	144	24-414	Septa	3.750	1.125	6
140-40C/EP	40 mL clear vial (B)	72	24-414	Septa	3.750	1.125	6
140-40C/EP/CT	40 mL clear vial closed top (B)	72	24-414	Septa	3.750	1.125	6
140-40C/EP/TS	40 mL clear vial thin septa (.060) (B)	72	24-414	Septa	3.750	1.125	6
140-40C/TS	Premium 40 mL clear vial thin septa (.060) (B)	72	24-414	Septa	3.750	1.125	7
140-40C/VK	Premium 40 mL clear vial Kit (B)	9	24-414	Septa	3.750	1.125	7
140-60C	60 mL clear vial - no foam (B)	144	24-414	Septa	5.000	1.125	6
141-40A	Premium 40 mL amber vial (B)	72	24-414	Septa	3.750	1.125	7
141-40A/CT	Premium 40 mL amber vial closed top (B)	72	24-414	Septa	3.750	1.125	7
141-40A/DB	40 mL amber vial - double box (B)	144	24-414	Septa	3.750	1.125	6
141-40A/EP	40 mL amber vial (B)	72	24-414	Septa	3.750	1.125	6
141-40A/EP/CT	40 mL amber vial closed top (B)	72	24-414	Septa	3.750	1.125	6
141-40A/EP/TS	40 mL amber vial thin septa (.060) (B)	72	24-414	Septa	3.750	1.125	6
141-40A/TS	Premium 40 mL amber vial thin septa (.060) (B)	72	24-414	Septa	3.750	1.125	7
141-40A/VK	Premium 40 mL amber vial Kit (B)	9	24-414	Septa	3.750	1.125	7
141-60A	60 mL amber vial - no foam (B)	144	24-414	Septa	3.750	1.125	6
142-01A/WS	1L (32oz) amber boston round OTWS (B)	12	33-430	Septa	8.100	3.700	2
142-02A/WS	60 mL (2 oz) amber straight side OTWS (B)	24	51-400	Septa	2.313	2.250	5

PRODUCT INDEX

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
142-02C	60 mL (2 oz) clear wide mouth (B)	24	53-400	PTFE	1.875	2.250	4
142-02C/WS	60 mL (2 oz) clear wide mouth OTWS (B)	24	53-400	Septa	1.875	2.250	4
142-04A/WS	125 mL (4 oz) amber straight side OTWS (B)	24	58-400	Septa	2.625	2.375	5
142-04C	125 mL (4 oz) clear wide mouth, short (B)	24	58-400	PTFE	2.625	2.375	4
142-04C/TL	125 mL (4 oz) clear wide mouth, tall (B)	24	48-400	PTFE	4.000	2.000	4
142-04C/WS	125 mL (4 oz) clear wide mouth, short OTWS (B)	24	58-400	Septa	2.625	2.375	4
142-08A/WS	250 mL (8 oz) amber straight side OTWS (B)	24	70-400	Septa	3.500	2.875	5
142-08C	250 mL (8oz) clear wide mouth, short (B)	24	70-400	PTFE	3.500	2.875	4
142-16C	500 mL (16 oz) clear wide mouth, short (B)	12	89-400	PTFE	3.875	3.500	4
143-02A/WS	60 mL (2 oz) amber wide mouth packer OTWS (B)	24	33-400	Septa	2.900	1.750	5
150-01W	1L (32 oz) HDPE cylinder (C)	12	28-410	PE F-217	9.250	3.500	9
150-01W/BPC	1L (32 oz) HDPE cylinder (bulk, caps attached)	65	28-410	PE F-217	9.250	3.500	9
150-01W/BR	1L (32 oz) HDPE boston round (C)	12	38-430	PE F-217	8.300	3.500	8
150-01W/BR/BPC	1L (32 oz) HDPE boston round (bulk, caps attached)	70	38-430	PE F-217	8.300	3.000	8
150-01W/N	1L (32 oz) Nalgene narrow mouth HDPE (C)	12	38-430	n/a	8.500	3.625	12
150-01W/N/BPC	1L (32 oz) Nalgene narrow mouth HDPE (bulk, caps attached)	50	38-430	n/a	8.500	3.625	12
150-01W/N/LP	1L (32 oz) Nalgene narrow mouth HDPE low particle	12	38-430	n/a	8.500	3.625	27
150-01W/SS	1L (32 oz) HDPE straight side (C)	12	89-400	PE F-217	6.750	3.625	10
150-01W/SS/BPC	1L (32 oz) HDPE straight side (bulk, caps attached)	84	89-400	PE F-217	6.750	3.625	10
150-01W/WM	1L (32 oz) HDPE wide mouth (C)	12	63-400	PE F-217	7.250	3.500	11
150-01W/WM/BPC	1L (32 oz) HDPE wide mouth (bulk, caps attached)	80	63-400	PE F-217	7.250	3.500	11
150-01WM/N	1L (32 oz) Nalgene wide mouth HDPE (C)	12	63-415	n/a	7.875	3.625	12
150-01WM/N/BPC	1L (32 oz) Nalgene wide mouth HDPE (bulk, caps attached)	50	63-415	n/a	7.875	3.625	12
150-02W/WM	2L (64 oz) HDPE wide mouth (C)	6	100-400	PE F-217	8.500	5.000	11
150-02W/WM/BPC	2L (64 oz) HDPE wide mouth (bulk, caps attached)	35	100-400	PE F-217	8.500	5.000	11
150-04W/WM	4L (128 oz) HDPE wide mouth (C)	4	100-400	PE F-217	10.000	6.250	11
150-04W/WM/BPC	4L (128 oz) HDPE wide mouth (bulk, caps attached)	24	100-400	PE F-217	10.000	6.250	11
151-500W	500 mL (16 oz) HDPE cylinder (C)	24	28-410	PE F-217	7.800	2.400	9
151-500W/BPC	500 mL (16 oz) HDPE cylinder (bulk, caps attached)	150	28-410	PE F-217	7.800	2.400	9
151-500W/BR	500 mL (16 oz) HDPE boston round (C)	24	38-430	PE F-217	6.500	3.000	8
151-500W/BR/BPC	500 mL (16 oz) HDPE boston round (bulk, caps attached)	135	28-410	PE F-217	7.250	2.500	8
151-500W/N	500 mL (16 oz) Nalgene narrow mouth HDPE (C)	24	38-430	n/a	8.500	3.625	12
151-500W/N/BPC	500 mL (16 oz) Nalgene N/M HDPE (bulk, caps attached)	125	38-430	n/a	8.500	3.625	12
151-500W/SS	500 mL (16 oz) HDPE straight side (C)	24	89-400	PE F-217	3.625	3.625	10
151-500W/SS/BPC	500 mL (16 oz) HDPE straight side (bulk, caps attached)	110	89-400	PE F-217	3.625	3.625	10
151-500W/WM	500 mL (16 oz) HDPE wide mouth (C)	24	53-400	PE F-217	6.000	2.750	11
151-500W/WM/BPC	500 mL (16 oz) HDPE wide mouth (bulk, caps attached)	180	53-400	PE F-217	6.000	2.750	11
151-500WM/N	500 mL (16 oz) Nalgene wide mouth HDPE (C)	24	53-415	n/a	6.875	2.875	12
151-500WM/N/BPC	500 mL (16 oz) Nalgene W/M HDPE (bulk, caps attached)	125	53-415	n/a	6.875	2.875	12
156-030WM/N/BPC	30 mL (1oz) HDPE Nalgene wide mouth (bulk, caps attached)	1000	28-415	n/a	2.375	1.375	12
156-060W	60 mL (2 oz) HDPE narrow mouth (C)	48	20-410	PE F-217	3.500	1.500	9
156-060W/BPC	60 mL (2 oz) HDPE N/M (bulk, caps attached)	875	20-410	PE F-217	3.500	1.500	9
156-060W/NBPC	60 mL (2 oz) HDPE Nalgene narrow mouth (bulk, caps attached)	1000	20-410	n/a	3.281	1.500	12
156-060W/WM/BPC	60 mL (2 oz) HDPE W/M (bulk/ caps attached)	750	38-400	PE F-217	3.384	1.540	11
156-060WM/N/BPC	60 mL (2 oz) HDPE Nalgene wide mouth (bulk, caps attached)	1000	28-415	n/a	3.250	1.500	12
156-120PP	120 mL polypropylene sterile bottle without thio tablet (screw cap)	433	38-400	PE F-217	3.750	1.813	21

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
156-120ST	120 mL polystyrene sterile bottle without thio tablet (screw cap)	414	38-400	PE F-217	3.750	1.938	21
156-125W	125 mL (4 oz) HDPE cylinder (C)	48	24-410	PE F-217	5.000	1.500	9
156-125W/BPC	125 mL (4 oz) HDPE cylinder (bulk, caps attached)	500	24-410	PE F-217	5.000	1.500	9
156-125W/BR	125 mL (4 oz) HDPE boston round (C)	48	24-410	PE F-217	4.750	1.875	8
156-125W/BR/BPC	125 mL (4 oz) HDPE boston round (bulk, caps attached)	550	24-410	PE F-217	4.750	1.875	8
156-125W/N	125 mL (4 oz) Nalgene narrow mouth HDPE (C)	48	24-415	n/a	4.000	2.000	12
156-125W/N/BPC	125 mL (4 oz) Nalgene narrow mouth HDPE (bulk, caps attached)	1000	24-415	n/a	4.000	2.000	12
156-125W/N/LP	125 mL (4 oz) Nalgene narrow mouth HDPE low particle	48	24-415	n/a	4.000	2.000	27
156-125W/SS	125 mL (4 oz) HDPE straight side (C)	48	70-400	PE F-217	2.500	2.875	10
156-125W/SS/BPC	125 mL (4 oz) HDPE straight side (bulk, caps attached)	370	70-400	PE F-217	2.500	2.875	10
156-125W/WM	125 mL (4 oz) HDPE wide mouth (C)	48	38-400	PE F-217	3.500	1.750	11
156-125W/WM/BPC	125 mL (4 oz) HDPE wide mouth (bulk, caps attached)	540	38-400	PE F-217	3.500	1.750	11
156-125WM/N	125 mL (4 oz) Nalgene wide mouth HDPE (C)	48	38-415	n/a	5.250	2.500	12
156-125WM/N/BPC	125 mL (4 oz) Nalgene wide mouth HDPE (bulk/ caps attached)	500	38-415	n/a	5.250	2.500	12
156-250PE	250 mL polyethylene sterile bottle without thio tablet (screw cap)	216	45-400	PE F-217	4.438	2.500	21
156-4BKT	120 mL polypropylene sterile bottle without thio tablet (flip top)	100	48mm	n/a	3.500	1.750	21
157-250W	250 mL (8 oz) HDPE cylinder (C)	24	24-410	PE F-217	4.000	2.000	9
157-250W/BPC	250 mL (8 oz) HDPE cylinder (bulk, caps attached)	230	24-410	PE F-217	4.000	2.000	9
157-250W/BR	250 mL (8 oz) HDPE boston round (C)	24	28-410	PE F-217	5.625	2.375	8
157-250W/BR/BPC	250 mL (8 oz) HDPE boston round (bulk, caps attached)	280	28-410	PE F-217	5.625	2.375	8
157-250W/N	250 mL (8 oz) Nalgene narrow mouth HDPE (C)	24	24-415	n/a	5.250	2.500	12
157-250W/N/BPC	250 mL (8 oz) Nalgene narrow mouth HDPE (bulk, caps attached)	250	24-415	n/a	5.250	2.500	12
157-250W/N/LP	250 mL (8 oz) Nalgene narrow mouth HDPE Low Particle	24	24-415	n/a	5.250	2.500	27
157-250W/WM	250 mL (8 oz) HDPE wide mouth (C)	24	45-400	PE F-217	4.750	2.500	11
157-250W/WM/BPC	250 mL (8 oz) HDPE wide mouth (bulk, caps attached)	280	45-400	PE F-217	4.750	2.500	11
157-250WM/N	250 mL (8 oz) Nalgene wide mouth HDPE (C)	24	43-415	n/a	5.250	2.500	12
157-250WM/N/BPC	250 mL (8 oz) Nalgene W/M HDPE (bulk, caps attached)	250	43-415	n/a	5.250	2.500	12
160-01	1 gallon LDPE Cubitainer (D)	12	38-400	PE F-217	6.600	6.000	10
160-01/BPC	1 gallon LDPE Cubitainer (bulk, caps attached)	160	38-400	PE F-217	6.500	6.000	10
160-025	1 quart LDPE Cubitainer (D)	12	38-400	PE F-217	4.500	4.000	10
160-025/BPC	1 quart LDPE Cubitainer (bulk, caps attached)	144	38-400	PE F-217	4.500	4.000	10
160-05	5 gallon LDPE Cubitainer (D)	4	38-400	PE F-217	12.000	12.000	10
160-05/BPC	5 gallon LDPE Cubitainer (bulk, caps attached)	36	38-400	PE F-217	12.000	11.500	10
160-2.5	2.5 gallon LDPE Cubitainer (D)	12	38-400	PE F-217	9.000	9.000	10
160-2.5/BPC	2.5 gallon LDPE Cubitainer (bulk, caps attached)	36	38-400	PE F-217	9.000	9.000	10
170-04/WM	HDPE 125 mL (4oz) HDPE oblong (C)	48	38-400	PE F-217	3.875	1.625	8
170-04WM/BPC	HDPE 125 mL (4oz) HDPE oblong (bulk, caps attached)	500	38-400	PE F-217	3.875	1.625	8
170-08/WM	HDPE 250 mL (8oz) HDPE oblong (C)	24	43-400	PE F-217	4.625	1 7/8 x 2 3/4	8
170-08WM/BPC	HDPE 250 mL (8oz) HDPE oblong (bulk, caps attached)	275	43-400	PE F-217	4.625	1 7/8 x 2 3/4	8
170-16/WM	500 mL (16 oz) HDPE oblong (C)	24	43-400	PE F-217	5.688	2 1/4 x 3 1/4	8

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
170-16WM/BPC	500 mL (16 oz) HDPE oblong (bulk, caps attached)	160	43-400	PE F-217	5.688	2 1/4 x 3 1/4	8
170-32/WM	960 mL (32 oz) HDPE oblong (C)	12	43-400	PE F-217	7.250	2 3/4 x 4.0	8
170-32WM/BPC	960 mL (32 oz) HDPE oblong (bulk, caps attached)	85	43-400	PE F-217	7.250	2 3/4 x 4.0	8
200-060	24-400 PTFE/silicone septa, precleaned (.060)	24	n/a	Septa	n/a	n/a	14
200-125	24-400 PTFE/silicone septa, precleaned (.125)	24	n/a	Septa	n/a	n/a	14
20-400/WS-2	White polypropylene cap with bonded PTFE faced silicone septa	100	20-400	Septa	n/a	n/a	14, 28
20-400/WS-3	White polypropylene cap with bonded PTFE faced silicone septa	100	20-400	Septa	n/a	n/a	14
24-400TL-3C	White polypropylene cap with PTFE liner	100	24-400	PTFE	n/a	n/a	13
24-400TL-3M	White polypropylene cap with PTFE liner	1000	24-400	PTFE	n/a	n/a	13
24-410-F-3C	White polypropylene cap with F217 foam liner	100	24-410	PE F217	n/a	n/a	13
24-410-F-3M	White polypropylene cap with F217 foam liner	1000	24-410	PE F217	n/a	n/a	13
24-414/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	24-414	Septa	n/a	n/a	14
24-414/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	24-414	Septa	n/a	n/a	14
24-414TL-3C	White polypropylene cap with PTFE liner	100	24-414	PTFE	n/a	n/a	13
24-414TL-3M	White polypropylene cap with PTFE liner	1000	24-414	PTFE	n/a	n/a	13
24-414WS/TS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	24-414	Septa	n/a	n/a	14
24-414WS/TS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	24-414	Septa	n/a	n/a	14
28-400TL-3C	White polypropylene cap with PTFE liner	100	28-400	PTFE	n/a	n/a	13
28-400TL-3M	White polypropylene cap with PTFE liner	1000	28-400	PTFE	n/a	n/a	13
300-060	24-400 PTFE/silicone septa, not precleaned (.060)	24	n/a	Septa	n/a	n/a	14
300-125	24-400 PTFE/silicone septa, not precleaned (.125)	24	n/a	Septa	n/a	n/a	14
310-2L	2L (64 oz) HDPE bleach jug	6	38-400	PE F-217	9.700	4.750	9
310-2L/BP	2L (64 oz) HDPE bleach jug (bulk, no caps)	40	38-400	PE F-217	9.700	4.750	9
310-2L/BPC	2L (64 oz) HDPE bleach jug (bulk, caps attached)	40	38-400	PE F-217	9.700	4.750	9
310-2L/BPS	2L (64 oz) HDPE bleach jug (bulk, caps unattached)	40	38-400	PE F-217	9.700	4.750	9
310-80A	2.5L (80 oz) amber jug	6	38-430	PTFE	12.000	5.250	3
311-04A	4L (128 oz) amber jug	4	38-430	PTFE	13.250	6.250	3
311-4L	4L (128 oz) HDPE bleach jug	6	38-430	PE F-217	11.900	6.000	9
311-4L/BP	4L (128 oz) HDPE bleach jug (bulk, no caps)	18	38-430	PE F-217	11.900	6.000	9
311-4L/BPC	4L (128 oz) HDPE bleach jug (bulk, caps attached)	18	38-430	PE F-217	11.900	6.000	9
311-4L/BPS	4L (128 oz) HDPE bleach jug (bulk, caps unattached)	18	38-430	PE F-217	11.900	6.000	9
3115-0TWS-2	30 mL polysulfone tube, open top cap, precleaned	100	20-400	Septa	3.750	1.000	28
312-01A	1L (32 oz) amber boston round	12	33-430	PTFE	8.100	3.700	2
312-01C	1L (32 oz) clear boston round	12	33-400	PTFE	8.000	3.680	2
313-500A	500 mL (16 oz) amber boston round	12	28-400	PTFE	6.700	3.000	2
313-500C	500 mL (16 oz) clear boston round	12	28-400	PTFE	6.625	3.000	2
314-250A	250 mL (8 oz) amber boston round	12	24-414	Septa	5.400	2.375	2
314-250C	250 mL (8 oz) clear boston round (A)	12	24-414	Septa	5.000	2.375	2
315-125A	125 mL (4 oz) amber boston round	12	24-414	Septa	4.600	1.875	2
317-10L	10L clear wide mouth	1	120-400	PTFE	13.000	9.500	4
317-2L	2L (64 oz) clear wide mouth	6	110-400	PTFE	6.300	5.620	4

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
317-4L	4L (128 oz) clear wide mouth	4	89-400	PTFE	9.800	6.000	4
320-02A	60 mL (2 oz) amber wide mouth packer	24	33-400	PTFE	2.900	1.750	5
320-04A	125 mL (4 oz) amber wide mouth packer	12	38-400	PTFE	3.750	2.125	5
321-08A	250 mL (8 oz) amber wide mouth packer	12	45-400	PTFE	4.750	2.500	5
322-16A	500 mL (16 oz) amber wide mouth packer	12	53-400	PTFE	5.800	3.180	5
323-32A	1L (32 oz) amber wide mouth packer	12	53-400	PTFE	7.250	3.870	5
323-40A	1250 mL (40 oz) amber wide mouth packer	24	70-400	PTFE	7.500	4.125	5
323-80A	2.5L (80 oz) amber wide mouth TCLP	4	70-400	PTFE	9.375	5.500	5
330-02A	60 mL (2 oz) amber straight side	24	51-400	PTFE	2.313	2.250	5
330-02A/WS	60 mL (2 oz) amber straight side OTWS	24	51-400	Septa	2.313	2.250	5
330-02C	60 mL (2 oz) clear wide mouth	24	53-400	PTFE	1.875	2.250	4
330-02C/WS	60 mL (2 oz) clear wide mouth OTWS	24	53-400	Septa	1.875	2.250	4
330-04A	125 mL (4 oz) amber straight side	24	58-400	PTFE	2.625	2.375	5
330-04A/WS	125 mL (4 oz) amber straight side OTWS	24	58-400	Septa	2.625	2.375	5
330-04C	125 mL (4 oz) clear wide mouth, short	24	58-400	PTFE	2.625	2.375	4
330-04C/TL	125 mL (4 oz) clear wide mouth, tall	24	45-400	PTFE	4.000	2.000	4
330-04C/WS	125 mL (4 oz) clear wide mouth, short OTWS	24	58-400	Septa	2.625	2.375	4
331-08A	250 mL (8 oz) amber straight side	12	70-400	PTFE	3.500	2.875	5
331-08A/WS	250 mL (8 oz) amber straight side OTWS	12	70-400	Septa	3.500	2.875	5
331-08C	250 mL (8 oz) clear wide mouth, short	12	70-400	PTFE	3.500	2.875	4
331-08C/TL	250 mL (8 oz) clear wide mouth, tall	12	58-400	PTFE	3.500	2.875	4
332-16C	500 mL (16 oz) clear wide mouth, short	12	89-400	PTFE	3.875	3.500	4
332-16C/TL	500 mL (16 oz) clear wide mouth, tall	12	63-400	PTFE	6.625	2.620	4
333-32C	1L (32 oz) clear wide mouth	12	89-400	PTFE	6.625	3.750	4
33-400FLC-3C	White polypropylene cap with F217 foam liner	100	33-400	PE F217	n/a	n/a	13
33-400FLC-3M	White polypropylene cap with F217 foam liner	1000	33-400	PE F217	n/a	n/a	13
33-400TL-3C	White polypropylene cap with PTFE liner	100	33-400	PTFE	n/a	n/a	13
33-400TL-3M	White polypropylene cap with PTFE liner	1000	33-400	PTFE	n/a	n/a	13
33-430/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	33-430	Septa	n/a	n/a	14
33-430/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	33-430	Septa	n/a	n/a	14
33-430TL-3C	White polypropylene cap with PTFE liner	100	33-430	PTFE	n/a	n/a	13
33-430TL-3M	White polypropylene cap with PTFE liner	1000	33-430	PTFE	n/a	n/a	13
339-20A	20 mL amber vial	72	24-414	Septa	2.250	1.125	6
339-20A/CT	20 mL amber vial closed top	72	24-414	Septa	2.250	1.125	6
339-20C	20 mL clear vial	72	24-414	Septa	2.250	1.125	6
339-20C/CT	20 mL VOA closed top clear vial	72	24-414	Septa	2.250	1.125	6
340-40C	40 mL clear vial	72	24-414	Septa	3.750	1.125	6
340-40C/CT	40 mL clear vial closed top	72	24-414	Septa	3.750	1.125	6
340-40C/DB	40 mL clear vial - double box	144	24-414	Septa	3.750	1.125	6
340-40C/TS	40 mL clear vial thin septa (.060)	72	24-414	Septa	3.750	1.125	6
340-60C	60 mL clear vial	144	24-414	Septa	5.000	1.125	6
340-VFS	Vial foam sleeve - 4 sleeves of 9 slots each, 36 slots-hard foam	4	n/a	n/a	3.188	1.125	7
341-40A	40 mL amber vial	72	24-414	Septa	5.000	1.125	6
341-40A/CT	40 mL amber vial closed top (B)	72	24-414	Septa	5.000	1.125	6
341-40A/DB	40 mL amber vial - double box	144	24-414	Septa	5.000	1.125	6

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
341-40A/TS	40 mL amber vial thin septa (.060)	72	24-414	Septa	5.000	1.125	6
341-60A	60 mL amber vial	144	24-414	Septa	5.000	1.125	6
342-01A/WS	1L (32oz) amber boston round OTWS (B)	12	33-430	Septa	8.500	3.750	2
343-02A/WS	60 mL (2 oz) amber wide mouth packer OTWS	24	33-400	Septa	2.900	1.750	5
345-VFS	Vial foam sleeve - 4 sleeves of 9 slots each, 36 slots-soft foam	4	n/a	n/a	3.500	4.000	7
350-01W	1L (32 oz) HDPE cylinder	12	28-410	PE F-217	9.250	3.500	9
350-01W/BP	1L (32 oz) HDPE cylinder (bulk, no cap)	65	28-410	n/a	9.250	3.500	9
350-01W/BPC	1L (32 oz) HDPE cylinder (bulk, caps attached)	65	28-410	PE F-217	9.250	3.500	9
350-01W/BPS	1L (32 oz) HDPE cylinder (bulk, caps unattached)	65	28-410	PE F-217	9.250	3.500	9
350-01W/BR	1L (32 oz) HDPE boston round	12	38-430	PE F-217	8.300	3.500	8
350-01W/BR/BP	1L (32 oz) HDPE boston round (bulk, no cap)	70	38-430	PE F-217	8.300	3.500	8
350-01W/BR/BPC	1L (32 oz) HDPE boston round (bulk, caps attached)	70	38-430	PE F-217	8.300	3.500	8
350-01W/BR/BPS	1L (32 oz) HDPE boston round (bulk, caps unattached)	70	38-430	PE F-217	8.300	3.500	8
350-01W/N	1L (32 oz) Nalgene narrow mouth HDPE	12	38-430	n/a	8.500	3.625	12
350-01W/N/BPC	1L (32 oz) Nalgene narrow mouth HDPE (bulk, caps attached)	50	38-430	n/a	8.500	3.625	12
350-01W/N/BPS	1L (32 oz) Nalgene narrow mouth HDPE (bulk, caps unattached)	50	38-430	n/a	8.500	3.625	12
350-01W/SS	1L (32 oz) HDPE straight side	12	89-400	PE F-217	6.750	3.625	10
350-01W/SS/BP	1L (32 oz) HDPE straight side (bulk, no caps)	84	89-400	PE F-217	6.750	3.625	10
350-01W/SS/BPC	1L (32 oz) HDPE straight side (bulk, caps attached)	84	89-400	PE F-217	6.750	3.625	10
350-01W/SS/BPS	1L (32 oz) HDPE straight side (bulk, caps unattached)	84	89-400	PE F-217	6.750	3.625	10
350-01W/WM	1L (32 oz) HDPE wide mouth	12	63-400	PE F-217	7.250	3.500	11
350-01W/WM/BP	1L (32 oz) HDPE wide mouth (bulk, no caps)	80	63-400	PE F-217	7.250	3.500	11
350-01W/WM/BPC	1L (32 oz) HDPE wide mouth (bulk, caps attached)	80	63-400	PE F-217	7.250	3.500	11
350-01W/WM/BPS	1L (32 oz) HDPE wide mouth (bulk, caps unattached)	80	63-400	PE F-217	7.250	3.500	11
350-01WM/N	1L (32 oz) Nalgene wide mouth HDPE	12	63-415	n/a	7.875	3.625	12
350-01WM/N/BPC	1L (32 oz) Nalgene wide mouth HDPE (bulk, caps attached)	50	63-415	n/a	7.875	3.625	12
350-01WM/N/BPS	1L (32 oz) Nalgene wide mouth HDPE (bulk, caps unattached)	50	63-415	n/a	7.875	3.625	12
350-02W/WM	2L (64 oz) HDPE wide mouth	6	100-400	PE F-217	8.500	5.000	11
350-02W/WM/BP	2L (64 oz) HDPE wide mouth (bulk, no caps)	35	100-400	n/a	8.500	5.000	11
350-02W/WM/BPC	2L (64 oz) HDPE wide mouth (bulk, caps attached)	35	100-400	PE F-217	8.500	5.000	11
350-02W/WM/BPS	2L (64 oz) HDPE wide mouth (bulk, caps unattached)	35	100-400	PE F-217	8.500	5.000	11
350-04W/WM	4L (128 oz) HDPE wide mouth	4	100-400	PE F-217	10.000	6.250	11
350-04W/WM/BP	4L (128 oz) HDPE wide mouth (bulk, no caps)	24	100-400	n/a	10.000	6.250	11
350-04W/WM/BPC	4L (128 oz) HDPE wide mouth (bulk, caps attached)	24	100-400	PE F-217	10.000	6.250	11
350-04W/WM/BPS	4L (128 oz) HDPE wide mouth (bulk, caps unattached)	24	100-400	PE F-217	10.000	6.250	11
351-500W	500 mL (16 oz) HDPE cylinder	24	28-410	PE F-217	7.800	2.400	9
351-500W/BP	500 mL (16 oz) HDPE cylinder (bulk, no caps)	216	28-410	n/a	7.800	2.400	9
351-500W/BPC	500 mL (16 oz) HDPE cylinder (bulk, caps attached)	216	28-410	PE F-217	7.800	2.400	9
351-500W/BPS	500 mL (16 oz) HDPE cylinder (bulk, caps unattached)	216	28-410	PE F-217	7.800	2.400	9
351-500W/BR	500 mL (16 oz) HDPE boston round	24	28-410	PE F-217	7.250	2.500	8
351-500W/BR/BP	500 mL (16 oz) HDPE boston round (bulk, no caps)	135	28-410	PE F-217	7.250	2.500	8
351-500W/BR/BPC	500 mL (16 oz) HDPE boston round (bulk, caps attached)	135	28-410	PE F-217	7.250	2.500	8
351-500W/BR/BPS	500 mL (16 oz) HDPE boston round (bulk, caps unattached)	135	28-410	PE F-217	7.250	2.500	8
351-500W/N	500 mL (16 oz) Nalgene narrow mouth HDPE	24	38-430	n/a	8.500	3.625	12
351-500W/N/BPC	500 mL (16 oz) Nalgene N/M HDPE (bulk, caps attached)	125	38-430	n/a	8.500	3.625	12
351-500W/N/BPS	500 mL (16 oz) Nalgene N/M HDPE (bulk, caps unattached)	125	38-430	n/a	8.500	3.625	12

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
351-500W/SS	500 mL (16 oz) HDPE straight side	24	89-400	PE F-217	3.625	3.625	10
351-500W/SS/BP	500 mL (16 oz) HDPE straight side (bulk, no caps)	110	89-400	PE F-217	3.625	3.625	10
351-500W/SS/BPC	500 mL (16 oz) HDPE straight side (bulk, caps attached)	110	89-400	PE F-217	3.625	3.625	10
351-500W/SS/BPS	500 mL (16 oz) HDPE straight side (bulk, caps unattached)	110	89-400	PE F-217	3.625	3.625	10
351-500W/WM	500 mL (16 oz) HDPE wide mouth	24	53-400	PE F-217	6.000	2.750	11
351-500W/WM/BP	500 mL (16 oz) HDPE wide mouth (bulk, no caps)	150	53-400	n/a	6.000	2.750	11
351-500W/WM/BPC	500 mL (16 oz) HDPE wide mouth (bulk, caps attached)	150	53-400	PE F-217	6.000	2.750	11
351-500W/WM/BPS	500 mL (16 oz) HDPE wide mouth (bulk, caps unattached)	150	53-400	PE F-217	6.000	2.750	11
351-500WM/N	500 mL (16 oz) Nalgene wide mouth HDPE	24	53-415	n/a	6.875	2.875	12
351-500WM/N/BPC	500 mL (16 oz) Nalgene W/M HDPE (bulk, caps attached)	125	53-415	n/a	6.875	2.875	12
351-500WM/N/BPS	500 mL (16 oz) Nalgene W/M HDPE (bulk, caps unattached)	125	53-415	n/a	6.875	2.875	12
356-030WM/N/BPC	30 mL (1oz) HDPE Nalgene wide mouth (bulk, caps attached)	1000	28-415	n/a	2.375	1.375	12
356-030WM/N/BPS	30 mL (1oz) HDPE Nalgene wide mouth (bulk, caps unattached)	1000	28-415	n/a	2.375	1.375	12
356-060W	60 mL (2 oz) HDPE narrow mouth	48	20-410	PE F-217	3.500	1.500	9
356-060W/BP	60 mL (2 oz) HDPE N/M (bulk, no caps)	875	20-410	n/a	3.500	1.500	9
356-060W/BPC	60 mL (2 oz) HDPE N/M (bulk, caps attached)	875	20-410	PE F-217	3.500	1.500	9
356-060W/BPS	60 mL (2 oz) HDPE N/M (bulk, caps unattached)	875	20-410	PE F-217	3.500	1.500	9
356-060W/NBPC	60 mL (2 oz) HDPE Nalgene narrow mouth (bulk, caps attached)	1000	20-410	n/a	3.281	1.500	12
356-060W/NBPS	60 mL (2 oz) HDPE Nalgene narrow mouth (bulk, caps unattached)	1000	20-410	n/a	3.281	1.500	12
356-060W/WM/BP	60 mL (2 oz) HDPE W/M (bulk, no caps)	750	38-400	PE F-217	3.384	1.540	11
356-060W/WM/BPC	60 mL (2 oz) HDPE W/M (bulk, caps attached)	750	38-400	PE F-217	3.384	1.540	11
356-060W/WM/BPS	60 mL (2 oz) HDPE W/M (bulk, caps unattached)	750	38-400	PE F-217	3.384	1.540	11
356-060WM/N/BPC	60 mL (2 oz) HDPE Nalgene wide mouth (bulk, caps attached)	1000	28-415	n/a	3.250	1.500	12
356-060WM/N/BPS	60 mL (2 oz) HDPE Nalgene wide mouth (bulk, caps unattached)	1000	28-415	n/a	3.250	1.500	12
356-125W	125 mL (4 oz) HDPE cylinder	48	24-410	PE F-217	5.000	1.500	9
356-125W/BP	125 mL (4 oz) HDPE cylinder (bulk, no caps)	500	24-410	n/a	5.000	1.500	9
356-125W/BPC	125 mL (4 oz) HDPE cylinder (bulk, caps attached)	500	24-410	PE F-217	5.000	1.500	9
356-125W/BPS	125 mL (4 oz) HDPE cylinder (bulk, caps unattached)	500	24-410	PE F-217	5.000	1.500	9
356-125W/BR	125 mL (4 oz) HDPE boston round	48	24-410	PE F-217	4.750	1.875	8
356-125W/BR/BP	125 mL (4 oz) HDPE boston round (bulk, no caps)	550	24-410	n/a	4.750	1.875	8
356-125W/BR/BPC	125 mL (4 oz) HDPE boston round (bulk, caps attached)	550	24-410	PE F-217	4.750	1.875	8
356-125W/BR/BPS	125 mL (4 oz) HDPE boston round (bulk, caps unattached)	550	24-410	PE F-217	4.750	1.875	8
356-125W/N	125 mL (4 oz) Nalgene narrow mouth HDPE	48	24-415	n/a	4.000	2.000	12
356-125W/N/BPC	125 mL (4 oz) Nalgene narrow mouth HDPE (bulk, caps attached)	1000	24-415	n/a	4.000	2.000	12
356-125W/N/BPS	125 mL (4 oz) Nalgene narrow mouth HDPE (bulk, caps unattached)	1000	24-415	n/a	4.000	2.000	12
356-125W/SS	125 mL (4 oz) HDPE straight side	48	70-400	PE F-217	2.500	2.875	10
356-125W/SS/BP	125 mL (4 oz) HDPE straight side (bulk, no caps)	370	70-400	n/a	2.500	2.875	10
356-125W/SS/BPC	125 mL (4 oz) HDPE straight side (bulk, caps attached)	370	70-400	PE F-217	2.500	2.875	10
356-125W/SS/BPS	125 mL (4 oz) HDPE straight side (bulk, caps unattached)	370	70-400	PE F-217	2.500	2.875	10
356-125W/WM	125 mL (4 oz) HDPE wide mouth	48	38-400	PE F-217	3.500	1.750	11
356-125W/WM/BP	125 mL (4 oz) HDPE wide mouth (bulk, no caps)	540	38-400	PE F-217	3.500	1.750	11
356-125W/WM/BPC	125 mL (4 oz) HDPE wide mouth (bulk, caps attached)	540	38-400	PE F-217	3.500	1.750	11

EP Scientific Products



SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
370-16WM	500 mL (16 oz) HDPE oblong	24	43-400	PE F-217	5.688	2 1/4 x 3 1/4	8
370-16WM/BP	500 mL (16 oz) HDPE oblong (bulk, no caps)	160	43-400	PE F-217	5.688	2 1/4 x 3 1/4	8
370-16WM/BPC	500 mL (16 oz) HDPE oblong (bulk, caps attached)	160	43-400	PE F-217	5.688	2 1/4 x 3 1/4	8
370-16WM/BPS	500 mL (16 oz) HDPE oblong (bulk, caps unattached)	160	43-400	PE F-217	5.688	2 1/4 x 3 1/4	8
370-32/WM/BPS	960 mL (32 oz) HDPE oblong (bulk, caps unattached)	90	43-400	PE F-217	7.250	2 3/4 x 4.0	8
370-32WM	960 mL (32 oz) HDPE oblong	12	43-400	PE F-217	7.250	2 3/4 x 4.0	8
370-32WM/BP	960 mL (32 oz) HDPE oblong (bulk, no caps)	85	43-400	PE F-217	7.250	2 3/4 x 4.0	8
370-32WM/BPC	960 mL (32 oz) HDPE oblong (bulk, caps attached)	85	43-400	PE F-217	7.250	2 3/4 x 4.0	8
38-400/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	38-400	Septa	n/a	n/a	14
38-400/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	38-400	Septa	n/a	n/a	14
38-400FLC-3C	White polypropylene cap with F217 foam liner	100	38-400	PE F217	n/a	n/a	13
38-400FLC-3M	White polypropylene cap with F217 foam liner	1000	38-400	PE F217	n/a	n/a	13
38-400TL-3C	White polypropylene cap with PTFE liner	100	38-400	PTFE	n/a	n/a	13
38-400TL-3M	White polypropylene cap with PTFE liner	1000	38-400	PTFE	n/a	n/a	13
38-430FLC-3C	White polypropylene cap with F217 foam liner	100	38-430	PE F217	n/a	n/a	13
38-430FLC-3M	White polypropylene cap with F217 foam liner	1000	38-430	PE F217	n/a	n/a	13
38-430TL-3C	White polypropylene cap with PTFE liner	100	38-430	PTFE	n/a	n/a	13
38-430TL-3M	White polypropylene cap with PTFE liner	1000	38-430	PTFE	n/a	n/a	13
40A-TOC/DB/LL	40 mL amber vial OTWS w/cap cover double box, TOC low level	144	24-414	Septa	3.750	1.125	28
40C-TOC	40 mL clear vial OTWS w/cap cover, TOC	72	24-414	Septa	3.750	1.125	28
40C-TOC/DB	40 mL clear vial OTWS w/cap cover, double box, TOC	144	24-414	Septa	3.750	1.125	28
40C-TOC/DB/LL	40 mL clear vial OTWS w/cap cover, double box, TOC low level	144	24-414	Septa	3.750	1.125	28
40C-TOC/LL	40 mL clear vial OTWS w/cap cover, TOC Low Level	72	24-414	Septa	3.750	1.125	28
43-400FLC-3C	White polypropylene cap with F217 foam liner	100	43-400	PE F217	n/a	n/a	13
43-400FLC-3M	White polypropylene cap with F217 foam liner	1000	43-400	PE F217	n/a	n/a	13
43-400TL-3C	White polypropylene cap with PTFE liner	100	43-400	PTFE	n/a	n/a	13
43-400TL-3M	White polypropylene cap with PTFE liner	1000	43-400	PTFE	n/a	n/a	13
45-400/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	45-400	Septa	n/a	n/a	14
45-400/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	45-400	Septa	n/a	n/a	14
45-400FLC-3C	White polypropylene cap with F217 foam liner	100	45-400	PE F217	n/a	n/a	13
45-400FLC-3M	White polypropylene cap with F217 foam liner	1000	45-400	PE F217	n/a	n/a	13
45-400TL-3C	White polypropylene cap with PTFE liner	100	45-400	PTFE	n/a	n/a	13
45-400TL-3M	White polypropylene cap with PTFE liner	1000	45-400	PTFE	n/a	n/a	13
48-400/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	48-400	Septa	n/a	n/a	14
48-400/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	48-400	Septa	n/a	n/a	14
48-400FLC-3C	White polypropylene cap with F217 foam liner	100	48-400	PE F217	n/a	n/a	13

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
48-400FLC-3M	White polypropylene cap with F217 foam liner	1000	48-400	PE F217	n/a	n/a	13
48-400TL-3C	White polypropylene cap with PTFE liner	100	48-400	PTFE	n/a	n/a	13
48-400TL-3M	White polypropylene cap with PTFE liner	1000	48-400	PTFE	n/a	n/a	13
51-400/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	51-400	Septa	n/a	n/a	14
51-400/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	51-400	Septa	n/a	n/a	14
51-400TL-3C	White polypropylene cap with PTFE liner	100	51-400	PTFE	n/a	n/a	13
51-400TL-3M	White polypropylene cap with PTFE liner	1000	51-400	PTFE	n/a	n/a	13
53-400/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	53-400	Septa	n/a	n/a	14
53-400/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	53-400	Septa	n/a	n/a	14
53-400FLC-3C	White polypropylene cap with F217 foam liner	100	53-400	PE F217	n/a	n/a	13
53-400FLC-3M	White polypropylene cap with F217 foam liner	1000	53-400	PE F217	n/a	n/a	13
53-400TL-3C	White polypropylene cap with PTFE liner	100	53-400	PTFE	n/a	n/a	13
53-400TL-3M	White polypropylene cap with PTFE liner	1000	53-400	PTFE	n/a	n/a	13
58-400/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	58-400	Septa	n/a	n/a	14
58-400/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	58-400	Septa	n/a	n/a	14
58-400FLC-3C	White polypropylene cap with F217 foam liner	100	58-400	PE F217	n/a	n/a	13
58-400FLC-3M	White polypropylene cap with F217 foam liner	1000	58-400	PE F217	n/a	n/a	13
58-400TL-3C	White polypropylene cap with PTFE liner	100	58-400	PTFE	n/a	n/a	13
58-400TL-3M	White polypropylene cap with PTFE liner	1000	58-400	PTFE	n/a	n/a	13
63-400FLC-3C	White polypropylene cap with F217 foam liner	100	63-400	PE F217	n/a	n/a	13
63-400FLC-3M	White polypropylene cap with F217 foam liner	1000	63-400	PE F217	n/a	n/a	13
63-400TL-3C	White polypropylene cap with PTFE liner	100	63-400	PTFE	n/a	n/a	13
63-400TL-3M	White polypropylene cap with PTFE liner	1000	63-400	PTFE	n/a	n/a	13
70-400/WS-3C	White polypropylene cap with bonded PTFE faced silicone septa	100	70-400	Septa	n/a	n/a	14
70-400/WS-3M	White polypropylene cap with bonded PTFE faced silicone septa	1000	70-400	Septa	n/a	n/a	14
70-400FLC-3C	White polypropylene cap with F217 foam liner	100	70-400	PE F217	n/a	n/a	13
70-400FLC-3M	White polypropylene cap with F217 foam liner	1000	70-400	PE F217	n/a	n/a	13
70-400TL-3C	White polypropylene cap with PTFE liner	100	70-400	PTFE	n/a	n/a	13
70-400TL-3M	White polypropylene cap with PTFE liner	1000	70-400	PTFE	n/a	n/a	13
83-400TL-3C	White polypropylene cap with PTFE liner	100	83-400	PTFE	n/a	n/a	13
83-400TL-3M	White polypropylene cap with PTFE liner	1000	83-400	PTFE	n/a	n/a	13
89-400FLC-3C	White polypropylene cap with F217 foam liner	100	89-400	PE F217	n/a	n/a	13
89-400TL-3C	White polypropylene cap with PTFE liner	100	89-400	PTFE	n/a	n/a	13
89-400TL-3M	White polypropylene cap with PTFE liner	1000	89-400	PTFE	n/a	n/a	13
ACH-5-1	Ampule w/ 0.5 mL 1:1 HCl	24	n/a	n/a	2.375	0.375	16
ACH-1	Ampule w/ 1 mL concentrated HCl	24	n/a	n/a	2.375	0.375	16
ACH-10	Ampule w/ 10 mL concentrated HCl	24	n/a	n/a	3.625	0.688	16
ACH-1-1	Ampule w/ 1 mL 1:1 HCl	24	n/a	n/a	2.375	0.375	16
ACH-2	Ampule w/ 2 mL concentrated HCl	24	n/a	n/a	2.438	0.438	16
ACH-2-1	Ampule w/ 2 mL 1:1 HCl	24	n/a	n/a	2.438	0.438	16

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
ACH-5	Ampule w/ 5 mL concentrated HCl	24	n/a	n/a	2.813	0.625	16
ACH-5-1	Ampule w/ 5 mL 1:1 HCl	24	n/a	n/a	2.813	0.625	16
ACH-LAB	Hydrochloric Acid label (roll)	1000	n/a	n/a	n/a	n/a	18
ACN-5	Ampule w/ 0.5 mL concentrated Nitric Acid	24	n/a	n/a	2.375	0.375	16
ACN-5-1	Ampule w/ 0.5 mL 1:1 Nitric Acid	24	n/a	n/a	2.375	0.375	16
ACN-1	Ampule w/ 1 mL concentrated Nitric Acid	24	n/a	n/a	2.375	0.375	16
ACN-10	Ampule w/ 10 mL concentrated Nitric Acid	24	n/a	n/a	3.625	0.688	16
ACN-10-1	Ampule w/ 10 mL 1:1 Nitric Acid	24	n/a	n/a	3.625	0.688	16
ACN-2	Ampule w/ 2 mL concentrated Nitric Acid	24	n/a	n/a	2.438	0.438	16
ACN-2-1	Ampule w/ 2 mL 1:1 Nitric Acid	24	n/a	n/a	2.438	0.438	16
ACN-5	Ampule w/ 5 mL concentrated Nitric Acid	24	n/a	n/a	2.813	0.625	16
ACN-5-1	Ampule w/ 5 mL 1:1 Nitric Acid	24	n/a	n/a	2.813	0.625	16
ACN-LAB	Nitric Acid label (roll)	1000	n/a	n/a	n/a	n/a	18
ACS-5	Ampule w/ 0.5 mL concentrated Sulfuric Acid	24	n/a	n/a	2.375	0.375	15
ACS-1	Ampule w/ 1 mL concentrated Sulfuric Acid	24	n/a	n/a	2.375	0.375	15
ACS-10	Ampule w/ 10 mL concentrated Sulfuric Acid	24	n/a	n/a	3.625	0.688	15
ACS-10-1	Ampule w/ 10 mL 1:1 Sulfuric Acid	24	n/a	n/a	3.625	0.688	15
ACS-1-1	Ampule w/ 1 mL 1:1 Sulfuric Acid	24	n/a	n/a	2.375	0.375	15
ACS-1-3	Ampule w/ 1 mL 1:3 Sulfuric Acid	24	n/a	n/a	2.375	0.375	15
ACS-2	Ampule w/ 2 mL concentrated Sulfuric Acid	24	n/a	n/a	2.438	0.438	15
ACS-4-1	Ampule w/ 4 mL 1:1 Sulfuric Acid	24	n/a	n/a	2.813	0.625	15
ACS-5	Ampule w/ 5 mL concentrated Sulfuric Acid	24	n/a	n/a	2.813	0.625	15
ACS-5-1	Ampule w/ 5 mL 1:1 Sulfuric Acid	24	n/a	n/a	2.813	0.625	15
ACS-LAB	Sulfuric Acid label (roll)	1000	n/a	n/a	n/a	n/a	18
APD-1	Ampule w/ 1 mL Nitric/Potassium Dichromate	24	n/a	n/a	2.375	0.375	17
APD-10	Ampule w/ 10 mL Nitric/Potass. Dichromate	24	n/a	n/a	3.625	0.688	17
APD-2	Ampule w/ 2 mL Nitric/Potassium Dichromate	24	n/a	n/a	2.438	0.438	17
APD-5	Ampule w/ 5 mL Nitric/Potassium Dichromate	24	n/a	n/a	2.813	0.625	17
ASH-1	Ampule w/ 1 mL NaOH (10N)	24	n/a	n/a	2.375	0.375	17
ASH-10	Ampule w/ 10 mL NaOH (10N)	24	n/a	n/a	3.625	0.688	17
ASH-2	Ampule w/ 2 mL NaOH (10N)	24	n/a	n/a	2.438	0.438	17
ASH-5	Ampule w/ 5 mL NaOH (10N)	24	n/a	n/a	2.813	0.625	17
ASH-LAB	Sodium Hydroxide label (roll)	1000	n/a	n/a	n/a	n/a	18
AST-1	Ampule w/ 1 mL .008% Sodium Thiosulfate	24	n/a	n/a	2.375	0.375	16
AST-10	Ampule w/ 10 mL .008% Sodium Thiosulfate	24	n/a	n/a	3.625	0.688	16
AST-2	Ampule w/ 2 mL .008% Sodium Thiosulfate	24	n/a	n/a	2.438	0.438	16
AST-5	Ampule w/ 5 mL .008% Sodium Thiosulfate	24	n/a	n/a	2.813	0.625	16
AST-LAB	Sodium Thiosulfate label (roll)	1000	n/a	n/a	n/a	n/a	18
AZS-1	Ampule w/ 1 mL Zinc Acetate/10N NaOH	24	n/a	n/a	2.375	0.375	17
AZS-10	Ampule w/ 10 mL Zinc Acetate/10N NaOH	24	n/a	n/a	3.625	0.688	17
AZS-2	Ampule w/ 2 mL Zinc Acetate/10N NaOH	24	n/a	n/a	2.438	0.438	17
AZS-5	Ampule w/ 5 mL Zinc Acetate/10N NaOH	24	n/a	n/a	2.813	0.625	17
AZS-LAB	Zinc Acetate label (roll)	1000	n/a	n/a	n/a	n/a	18
C20-02A/PF	60 mL (2 oz) amber wide mouth packer, depyrogenated	12	33-400	PTFE	3.000	1.625	30
C20-04A/PF	125 mL (4 oz) amber wide mouth packer, depyrogenated	12	38-400	PTFE	3.750	2.125	30
CL-002S/S	Labels 1-1/8 X 6-1/2 (13 sheets of 8 labels)	104	n/a	n/a	n/a	n/a	23
CL-003/S	Labels 2-1/2 X 2-1/2 (10 sheets of 12 labels)	120	n/a	n/a	n/a	n/a	23
CS-001/RL	Custody seals (large) 1 X 6-1/2 (roll of 500)	500	n/a	n/a	n/a	n/a	23

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
CS-001S/RL	Custody seals (small) 1X 3 (roll of 1000)	500	n/a	n/a	n/a	n/a	23
CT18-TOC	16x125 18 mL culture tube round bottom TOC <20ppb	255	15-425	Septa	5.000	0.563	28
CT18-TOC/LL	16x125 18 mL culture tube round bottom Low Level TOC <10ppb	255	15-425	Septa	5.000	0.563	28
CTS-1275	12x75 silanized culture tube (4 packs of 250)	1000	n/a	n/a	2.938	0.438	33
CTS-13100	13x100 silanized culture tube (4 packs of 250)	1000	n/a	n/a	3.938	0.500	33
CTS-16100	16x100 silanized culture tube (4 packs of 250)	1000	n/a	n/a	4.000	0.563	33
CTS-16125-2	16x125 silanized culture tube (4 packs of 250)	1000	n/a	n/a	4.938	1.500	33
DC-VOA	Dust covers for 24-414 open top cap	500	n/a	n/a	0.563	1.125	7
FEP01KNM/LP	1L narrow mouth FEP fluoropolymer bottle	4	38-415	n/a	7.813	3.563	27
FEP125NM/LP	125 mL narrow mouth FEP fluoropolymer bottle	6	24-415	n/a	4.375	1.813	27
FEP250NM/LP	250 mL narrow mouth FEP fluoropolymer bottle	4	24-415	n/a	5.156	2.375	27
FEP500NM/LP	500 mL narrow mouth FEP fluoropolymer bottle	4	28-415	n/a	6.375	2.375	27
GVB-100A	40 mL amber vial	100	24-414	Septa	3.750	1.125	6
GVB-100C	40 mL clear vial	100	24-414	Septa	3.750	1.125	6
MCA-1	Ampule w/ 1 mL Monochloroacetic buffer	24	n/a	n/a	2.375	0.375	18
MCA-10	Ampule w/ 10 mL Monochloroacetic buffer	24	n/a	n/a	3.625	0.688	18
MCA-2	Ampule w/ 2 mL Monochloroacetic buffer	24	n/a	n/a	2.438	0.438	18
MCA-5	Ampule w/ 5 mL Monochloroacetic buffer	24	n/a	n/a	2.813	0.625	18
MCA-LAB	Monochloroacetic buffer label (roll)	1000	n/a	n/a	n/a	n/a	18
P140-40CEPPTTB	40 mL clear vial w/5 mL P&T Methanol, tare weighed, stir bar	72	24-414	Septa	3.750	1.125	20
P140-40CEPPTTW	40 mL clear vial w/5 mL P&T Methanol, Tare weighed	72	24-414	Septa	3.750	1.125	20
P156-120PP	120 mL polypropylene sterile bottle with thio tablet (screw cap)	200	38-400	PE F-217	3.750	1.813	21
P156-120ST	120 mL polystyrene sterile bottle with thio tablet (screw cap)	200	38-400	PE F-217	3.750	1.938	21
P156-150ST	150 mL polystyrene sterile bottle with thio tablet (screw cap)	342	38-400	PE F-217	4.125	1.938	21
P156-250PE	150 mL polyethylene sterile bottle with thio tablet (screw cap)	228	45-400	PE F-217	4.438	2.500	21
P156-4BKT	120 mL polypropylene sterile bottle with thio tablet (flip top)	100	48mm	n/a	3.500	1.750	21
PP112-01A/5HA	Preserved container w/ 5 mL 1:1 HCl	12	33-430	PTFE	8.100	3.700	19
PP112-01A/5SA	Preserved container w/ 5 mL 1:1 Sulfuric Acid	12	33-430	PTFE	8.100	3.700	19
PP113-500A/3HA	Preserved container w/ 3 mL 1:1 HCl	12	28-400	PTFE	6.625	3.000	19
PP114-250A/.5SA	Preserved container w/ 0.5 mL 1:1 Sulfuric Acid	12	24-414	PTFE	5.400	2.375	19
PP123-32A/5SA	Preserved container w/ 5 mL 1:1 Sulfuric Acid	12	53-400	PTFE	7.250	3.870	19
PP140-40C.2HA	Preserved container w/ 0.2 mL 1:1 HCl	72	24-414	Septa	3.750	1.125	19
PP140-40CDB.2HA	Preserved container w/ 0.2 mL 1:1 HCl	144	24-414	Septa	3.750	1.125	19
PP140-40CEP.2HA	Preserved container w/ 0.2 mL 1:1 HCl	72	24-414	Septa	3.750	1.125	19
PP140-40CEPPTTB	40 mL clear vial w/10 mL P&T Methanol, tare weighed, stir bar	72	24-414	Septa	3.750	1.125	20
PP140-40CEPPTTW	40 mL clear vial w/10 mL P&T Methanol, tare weighed	72	24-414	Septa	3.750	1.125	20
PP140-40CEPSBTB	40 mL clear vial w/Sodium Bisulfate, tare weighed, stir bar	72	24-414	Septa	3.750	1.125	20
PP140-40CEPSBTW	40 mL clear vial w/Sodium Bisulfate, tare weighed	72	24-414	Septa	3.750	1.125	20
PP141-40A.2HA	Preserved container w/ 0.2 mL 1:1 HCl	72	24-414	Septa	3.750	1.125	19
PP141-40ADB.2HA	Preserved container w/ 0.2 mL 1:1 HCl	144	24-414	Septa	3.750	1.125	19
PP141-40AEP.2HA	Preserved container w/ 0.2 mL 1:1 HCl	72	24-414	Septa	3.750	1.125	19
PP141-40AEPSBTB	40 mL amber vial w/Sodium Bisulfate, tare weighed, stir bar	72	24-414	Septa	3.750	1.125	20
PP150-01W/5NA	Preserved container w/ 5 mL 1:1 Nitric Acid	12	28-410	PE F217	9.250	3.500	19

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
PP150-01WN5NA	Preserved container w/ 5 mL 1:1 Nitric Acid	12	38-430	n/a	8.500	3.625	19
PP151-500W/1SH	Preserved container w/ 1 mL 10 N NaOH	24	28-410	PE F217	7.250	2.500	19
PP151-500WN/1SH	Preserved container w/ 1 mL 10 N NaOH	24	28-410	PE F217	8.500	3.625	19
PP156-125W/.5NA	Preserved container w/ 0.5 mL 1:1 Nitric Acid	48	24-410	PE F217	5.000	1.500	19
PP156-125WN/.5NA	Preserved container w/ 0.5 mL 1:1 Nitric Acid	48	24-410	PE F217	4.000	2.000	19
PP157-250W/1NA	Preserved container w/ 1 mL 1:1 Nitric Acid	24	24-410	PE F217	5.000	1.500	19
PP157-250W/1SH	Preserved container w/ 1 mL 10 N NaOH	24	24-410	PE F217	5.000	1.500	19
PP157-250WN/1NA	Preserved container w/ 1 mL 1:1 Nitric Acid	24	24-410	PE F217	5.250	2.500	19
PP157-250WN/1SH	Preserved container w/ 1 mL 10 N NaOH	24	24-410	PE F217	5.250	2.500	19
S114-125A	125 mL (4 oz) amber boston round OTWS (B)	12	24-414	Septa	4.600	1.875	2
S114-125A/TOC	125 mL (4 oz) amber boston round CTWS TOC <20ppb	12	24-414	Septa	4.600	1.875	28
S114-250A	250 mL (8 oz) amber boston round OTWS (B)	12	24-414	Septa	5.400	2.375	2
S114-250A/TOC	250 mL (8oz) amber boston round OTWS TOC <20 ppb	12	24-414	Septa	5.400	2.375	28
S114-250C/CT	250 mL (8 oz) clear boston round CTWS (B)	12	24-414	Septa	5.000	2.375	2
S114-250C/CT/TOC	250 mL (8 oz) clear boston round CTWS TOC <20ppb	24	24-414	Septa	5.000	2.375	28
S114-250C/TOC	250 mL (8 oz) clear boston round OTWS TOC <20ppb	24	24-414	Septa	5.000	2.375	28
S114-250CT	250 mL (8 oz) amber boston round CTWS (B)	12	24-414	Septa	5.000	2.375	2
S24-400-S2	24-400 PTFE/silicone septa, precleaned (.060)	144	n/a	Septa	n/a	n/a	14
S24-400-S3	24-400 PTFE/silicone septa, not precleaned (.060)	144	n/a	Septa	n/a	n/a	14
S314-125A	125 mL (4 oz) amber boston round OTWS	12	24-414	Septa	4.600	1.875	2
S314-250A	250 mL (8 oz) amber boston round OTWS	12	24-414	Septa	5.400	2.375	2
S314-250C/CT	250 mL (8 oz) clear boston round CTWS	12	24-414	Septa	5.000	2.375	2
S314-250CT	250 mL (8 oz) amber boston round CTWS	12	24-414	Septa	5.000	2.375	2
SAA-SV2-2	2 mL silanized amber vial, open top	100	8-425	Septa	1.250	0.438	33
SAA-SV2B-2	2 mL silanized amber vial, open top	100	8-425	Septa	1.250	0.438	33
SAA-SV4-2	4 mL silanized amber vial, open top	100	13-425	Septa	1.750	0.563	33
SCA-SV2-2	2 mL silanized clear vial, open top	100	8-425	Septa	1.250	0.438	33
SCA-SV2B-2	2 mL silanized clear vial, open top	100	8-425	Septa	1.250	0.438	33
SCA-SV4-2	4 mL silanized clear vial, open top	100	13-425	Septa	1.750	0.563	33
SCT-18100/TOC	18x100 17 mL culture tube open top, TOC <20ppb	200	15-425	Septa	4.000	0.625	28
SCT-25150/TOC	25x150 60 mL culture tube open top, TOC <20ppb	144	24-414	Septa	6.000	0.938	28
SG-003	Environmental sampling guide, (25 min.)	25	n/a	n/a	n/a	n/a	23
ST100-20	100 mL clear empty sterile vial, 20mm cap, sealed	50	20mm	Stopper	3.750	1.750	30
ST10-20	10 mL clear empty sterile vial, 20mm cap, sealed	50	20mm	Stopper	2.000	0.813	30
ST1-11	1 mL clear empty sterile vial, 11mm cap, sealed	100	11mm	Stopper	1.188	0.469	30
ST20-20	20 mL clear empty sterile vial, 20mm cap, sealed	50	20mm	Stopper	2.313	0.969	30
ST2-13	2 mL clear empty sterile vial, 13mm cap, sealed	100	13mm	Stopper	1.313	0.500	30
ST30-20	30 mL clear empty sterile vial, 20mm cap, sealed	50	20mm	Stopper	2.500	1.313	30
ST50-20	50 mL clear empty sterile vial, 20mm cap, sealed	50	20mm	Stopper	2.688	1.500	30
ST5-13	5 mL clear empty sterile vial, 13mm cap, sealed	50	13mm	Stopper	2.000	0.594	30
ST5-20	5 mL clear empty sterile vial, 20mm cap, sealed	50	20mm	Stopper	1.500	0.781	30
STT-13100-S	13x100 silanized culture tube, S/T without cap (4 packs of 250)	1000	n/a	n/a	3.938	0.500	33
STT-16100-S	16x100 silanized culture tube, S/T without cap (4 packs of 250)	1000	n/a	n/a	3.938	0.563	33
SVCA-1	3.5 mL vial w/ 1 mL Monochloroacetic buffer	24	13-400	n/a	2.688	0.438	18
SVCA-10	10 mL vial w/ 10 mL Monochloroacetic buffer	24	18-400	n/a	3.313	0.625	18
SVCA-2	3.5 mL vial w/ 2 mL Monochloroacetic buffer	24	13-400	n/a	2.688	0.438	18

SPECIFICATIONS

EP Catalog #	Description	QtyCs	Cap Size (mm)	Liner	Height (in.)	Diameter (in.)	Page
SVCA-5	8 mL vial w/ 5 mL Monochloroacetic buffer	24	18-400	n/a	2.500	0.625	18
SVCH-.5-1	3.5 mL vial w/ 0.5 mL 1:1 HCl	24	13-400	n/a	2.688	0.438	16
SVCH-1	3.5 mL vial w/ 1 mL concentrated HCl	24	13-400	n/a	2.688	0.438	16
SVCH-10	10 mL vial w/ 10 mL concentrated HCl	24	18-400	n/a	3.313	0.625	16
SVCH-1-1	3.5 mL vial w/ 1 mL 1:1 HCl	24	13-400	n/a	2.688	0.438	16
SVCH-2	3.5 mL vial w/ 2 mL concentrated HCl	24	13-400	n/a	2.688	0.438	16
SVCH-2-1	3.5 mL vial w/ 2 mL 1:1 HCl	24	13-400	n/a	2.688	0.438	16
SVCH-5	8 mL vial w/ 5 mL concentrated HCl	24	18-400	n/a	2.500	0.625	16
SVCH-5-1	8 mL vial w/ 5 mL 1:1 HCl	24	18-400	n/a	2.500	0.625	16
SVCN-.5	3.5 mL vial w/ 0.5 mL concentrated Nitric Acid	24	13-400	n/a	2.688	0.438	16
SVCN-.5-1	3.5 mL vial w/ 0.5 mL 1:1 Nitric Acid	24	13-400	n/a	2.688	0.438	16
SVCN-1	3.5 mL vial w/ 1 mL concentrated Nitric Acid	24	13-400	n/a	2.688	0.438	16
SVCN-10	10 mL vial w/ 10 mL concentrated Nitric Acid	24	18-400	n/a	3.313	0.625	16
SVCN-10-1	10 mL vial w/ 10 mL 1:1 Nitric Acid	24	18-400	n/a	3.313	0.625	16
SVCN-2	3.5 mL vial w/ 2 mL concentrated Nitric Acid	24	13-400	n/a	2.688	0.438	16
SVCN-2-1	3.5 mL vial w/ 2 mL 1:1 Nitric Acid	24	13-400	n/a	2.688	0.438	16
SVCN-5	8 mL vial w/ 5 mL concentrated Nitric Acid	24	18-400	n/a	2.500	0.625	16
SVCN-5-1	8 mL vial w/ 5 mL 1:1 Nitric Acid	24	18-400	n/a	2.500	0.625	16
SVCS-.5	3.5 mL vial w/ 0.5 mL concentrated Sulfuric Acid	24	13-400	n/a	2.688	0.438	15
SVCS-1	3.5 mL vial w/ 1 mL concentrated Sulfuric Acid	24	13-400	n/a	2.688	0.438	15
SVCS-10	10 mL vial w/ 10 mL concentrated Sulfuric Acid	24	18-400	n/a	3.313	0.625	15
SVCS-10-1	10 mL vial w/ 10 mL 1:1 Sulfuric Acid	24	18-400	n/a	3.313	0.625	15
SVCS-1-1	3.5 mL vial w/ 1 mL 1:1 Sulfuric Acid	24	13-400	n/a	2.688	0.438	15
SVCS-1-3	3.5 mL vial w/ 1 mL 1:3 Sulfuric Acid	24	13-400	n/a	2.688	0.438	15
SVCS-2	3.5 mL vial w/ 2 mL concentrated Sulfuric Acid	24	13-400	n/a	2.688	0.438	15
SVCS-4-1	8 mL vial w/ 4 mL 1:1 Sulfuric Acid	24	18-400	n/a	2.500	0.625	15
SVCS-5	8 mL vial w/ 5 mL concentrated Sulfuric Acid	24	18-400	n/a	2.500	0.625	15
SVCS-5-1	8 mL vial w/ 5 mL 1:1 Sulfuric Acid	24	18-400	n/a	2.500	0.625	15
SVPD-1	3.5 mL vial w/ 1 mL Nitric/Potassium Dichromate	24	13-400	n/a	2.688	0.438	17
SVPD-10	10 mL vial w/ 10 mL Nitric/Potassium Dichromate	24	18-400	n/a	3.313	0.625	17
SVPD-2	3.5 mL vial w/ 2 mL Nitric/Potassium Dichromate	24	13-400	n/a	2.688	0.438	17
SVPD-5	8 mL vial w/ 5 mL Nitric/Potassium Dichromate	24	18-400	n/a	2.500	0.625	17
SVSH-1	3.5 mL vial w/ 1 mL NaOH (10N)	24	13-400	n/a	2.688	0.438	17
SVSH-10	10 mL vial w/ 10 mL NaOH (10N)	24	18-400	n/a	3.313	0.625	17
SVSH-2	3.5 mL vial w/ 2 mL NaOH (10N)	24	13-400	n/a	2.688	0.438	17
SVSH-5	8 mL vial w/ 5 mL NaOH (10N)	24	18-400	n/a	2.500	0.625	17
SVST-1	3.5 mL vial w/ 1 mL .008% Sodium Thiosulfate	24	13-400	n/a	2.688	0.438	16
SVST-10	10 mL vial w/ 10 mL .008% Sodium Thiosulfate	24	18-400	n/a	3.313	0.625	16
SVST-2	3.5 mL vial w/ 2 mL .008% Sodium Thiosulfate	24	13-400	n/a	2.688	0.438	16
SVST-5	8 mL vial w/ 5 mL .008% Sodium Thiosulfate	24	18-400	n/a	2.500	0.625	16
SVZS-1	3.5 mL vial w/ 1 mL Zinc Acetate/10N NaOH	24	13-400	n/a	2.688	0.438	17
SVZS-10	10 mL vial w/ 10 mL Zinc Acetate/10N NaOH	24	18-400	n/a	3.313	0.625	17
SVZS-2	3.5 mL vial w/ 2 mL Zinc Acetate/10N NaOH	24	13-400	n/a	2.688	0.438	17
SVZS-5	8 mL vial w/ 5 mL Zinc Acetate/10N NaOH	24	18-400	n/a	2.500	0.625	17
T20070071UP4M	7x7 gas sampling bag (10 bags/cs.)	10	n/a	n/a	n/a	n/a	22
VB-003/EP	Vial box w/ chipboard dividers-72 slots	1	n/a	n/a	n/a	n/a	7

TERMS AND CONDITIONS

UNLESS OTHERWISE EXPRESSLY AGREED IN WRITING, ALL SALES ARE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

1. GENERAL. Thermo Fisher Glass and Specialty Consumables Division, a part of Thermo Fisher Scientific ("Seller") hereby offers for sale to the buyer named on the face hereof ("Buyer") the products listed on the face hereof (the "Products") on the express condition that Buyer agrees to accept and be bound by the terms and conditions set forth herein. Any provisions contained in any document issued by Buyer are expressly rejected and if the terms and conditions in this Agreement differ from the terms of Buyer's offer, this document shall be construed as a counter offer and shall not be effective as an acceptance of Buyer's document. Buyer's receipt of Products or Seller's commencement of the services provided hereunder will constitute Buyer's acceptance of this Agreement. This is the complete and exclusive statement of the contract between Seller and Buyer with respect to Buyer's purchase of the Products. No waiver, consent, modification, amendment or change of the terms contained herein shall be binding unless in writing and signed by Seller and Buyer. Seller's failure to object to terms contained in any subsequent communication from Buyer will not be a waiver or modification of the terms set forth herein. All orders are subject to acceptance in writing by an authorized representative of Seller.

2. PRICE. All prices published by Seller or quoted by Seller's representatives may be changed at any time without notice. All prices quoted by Seller or Seller's representatives are valid for thirty (30) days, unless otherwise stated in writing. All prices for the Products will be as specified by Seller or, if no price has been specified or quoted, will be Seller's price in effect at the time of shipment. All prices are subject to adjustment on account of specifications, quantities, raw materials, cost of production, shipment arrangements or other terms or conditions which are not part of Seller's original price quotation.

3. TAXES AND OTHER CHARGES. Prices for the Products exclude all sales, value added and other taxes and duties imposed with respect to the sale, delivery, or use of any Products covered hereby, all of which taxes and duties must be paid by Buyer. If Buyer claims any exemption, Buyer must provide a valid, signed certificate or letter of exemption for each respective jurisdiction.

4. TERMS OF PAYMENT. Seller may invoice Buyer upon shipment for the price and all other charges payable by Buyer in accordance with the terms on the face hereof. If no payment terms are stated on the face hereof, payment shall be net thirty (30) days from the date of invoice. If Buyer fails to pay any amounts when due, Buyer shall pay Seller interest thereon at a periodic rate of one and one-half percent (1.5%) per month (or, if lower, the highest rate permitted by law), together with all costs and expenses (including without limitation reasonable attorneys' fees and disbursements and court costs) incurred by Seller in collecting such overdue amounts or otherwise enforcing Seller's rights hereunder. Seller reserves the right to require from Buyer full or partial payment in advance, or other security that is satisfactory to Seller, at any time that Seller believes in good faith that Buyer's financial condition does not justify the terms of payment specified. All payments shall be made in U.S. Dollars.

5. DELIVERY; CANCELLATION OR CHANGES BY BUYER. The Products will be shipped to the destination specified by Buyer, F.O.B. Seller's shipping point. Seller will have the right, at its election, to make partial shipments of the Products and to invoice each shipment separately. Seller reserves the right to stop delivery of Products in transit and to withhold shipments in whole or in part if Buyer fails to make any payment to Seller when due or otherwise fails to perform its obligations hereunder. All shipping dates are approximate only, and Seller will not be liable for any loss or damage resulting from any delay in delivery or failure to deliver which is due to any cause beyond Seller's reasonable control. In the event of a delay due to any cause beyond Seller's reasonable control, Seller reserves the right to terminate the order or to reschedule the shipment within a reasonable period of time, and Buyer will not be entitled to refuse delivery or otherwise be relieved of any obligations as the result of such delay. Products as to which delivery is delayed due to any cause within Buyer's control may be placed in storage by Seller at Buyer's risk and expense and for Buyer's account. Orders in process may be canceled only with Seller's written consent and upon payment of Seller's cancellation charges. Orders in process may not be changed except with Seller's written consent and upon agreement by the parties as to an appropriate adjustment in the purchase price therefor. Credit will not be allowed for Products returned without the prior written consent of Seller.

6. TITLE AND RISK OF LOSS. Notwithstanding the trade terms indicated above and subject to Seller's right to stop delivery of Products in transit, title to and risk of loss of the Products will pass to Buyer upon delivery of possession of the Products by Seller to the carrier;

provided, however, that title to any software incorporated within or forming a part of the Products shall at all times remain with Seller or the licensor(s) thereof, as the case may be.

7. WARRANTY. Seller warrants that the Products will operate or perform substantially in conformance with Seller's published specifications and be free from defects in material and workmanship, when subjected to normal, proper and intended usage by properly trained personnel, for the period of time set forth in the product documentation, published specifications or package inserts. If a period of time is not specified in Seller's product documentation, published specifications or package inserts, the warranty period shall be one (1) year from the date of shipment to Buyer for equipment and ninety (90) days for all other products (the "Warranty Period"). Seller agrees during the Warranty Period, to repair or replace, at Seller's option, defective Products so as to cause the same to operate in substantial conformance with said published specifications; provided that Buyer shall (a) promptly notify Seller in writing upon the discovery of any defect, which notice shall include the product model and serial number (if applicable) and details of the warranty claim; and (b) after Seller's review, Seller will provide Buyer with service data and/or a Return Material Authorization ("RMA"), which may include biohazard decontamination procedures and other product-specific handling instructions, then, if applicable, Buyer may return the defective Products to Seller with all costs prepaid by Buyer. Replacement parts may be new or refurbished, at the election of Seller. All replaced parts shall become the property of Seller. Shipment to Buyer of repaired or replacement Products shall be made in accordance with the Delivery provisions of the Seller's Terms and Conditions of Sale. Consumables are expressly excluded from this warranty.

Notwithstanding the foregoing, Products supplied by Seller that are obtained by Seller from an original manufacturer or third party supplier are not warranted by Seller, but Seller agrees to assign to Buyer any warranty rights in such Product that Seller may have from the original manufacturer or third party supplier, to the extent such assignment is allowed by such original manufacturer or third party supplier.

In no event shall Seller have any obligation to make repairs, replacements or corrections required, in whole or in part, as the result of (i) normal wear and tear, (ii) accident, disaster or event of force majeure, (iii) misuse, fault or negligence of or by Buyer, (iv) use of the Products in a manner for which they were not designed, (v) causes external to the Products such as, but not limited to, power failure or electrical power surges, (vi) improper storage and handling of the Products or (vii) use of the Products in combination with equipment or software not supplied by Seller. If Seller determines that Products for which Buyer has requested warranty services are not covered by the warranty hereunder, Buyer shall pay or reimburse Seller for all costs of investigating and responding to such request at Seller's then prevailing time and materials rates. If Seller provides repair services or replacement parts that are not covered by this warranty, Buyer shall pay Seller therefor at Seller's then prevailing time and materials rates. ANY INSTALLATION, MAINTENANCE, REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL, OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCTS.

THE OBLIGATIONS CREATED BY THIS WARRANTY STATEMENT TO REPAIR OR REPLACE A DEFECTIVE PRODUCT SHALL BE THE SOLE REMEDY OF BUYER IN THE EVENT OF A DEFECTIVE PRODUCT. EXCEPT AS EXPRESSLY PROVIDED IN THIS WARRANTY STATEMENT, SELLER DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, WITH RESPECT TO THE PRODUCTS, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. SELLER DOES NOT WARRANT THAT THE PRODUCTS ARE ERROR-FREE OR WILL ACCOMPLISH ANY PARTICULAR RESULT.

8. INDEMNIFICATION.

8.1 By Seller. Seller agrees to indemnify, defend and save Buyer, its officer, directors, and employees from and against any and all damages, liabilities, actions, causes of action, suits, claims, demands, losses, costs and expenses (including without limitation reasonable attorney's fees) ("Indemnified Items") for (i) injury to or death of persons or damage to property to the extent caused by the negligence or willful misconduct of Seller, its employees, agents or representatives or contractors in connection with the performance of services at Buyer's premises under this Agreement and (ii) claims that a Product infringes any valid United States patent, copyright or trade secret; provided, however, Seller shall have no liability under this Section to the extent any such Indemnified Items are caused by either

(i) the negligence or willful misconduct of Buyer, its employees, agents or representatives or contractors, (ii) by any third party, (iii) use of a Product in combination with equipment or software not supplied by Seller where the Product would not itself be infringing, (iv) compliance with Buyer's designs, specifications or instructions, (v) use of the Product in an application or environment for which it was not designed or (vi) modifications of the Product by anyone other than Seller without Seller's prior written approval. Buyer shall provide Seller prompt written notice of any third party claim covered by Seller's indemnification obligations hereunder. Seller shall have the right to assume exclusive control of the defense of such claim or, at the option of the Seller, to settle the same. Buyer agrees to cooperate reasonably with Seller in connection with the performance by Seller of its obligations in this Section.

Notwithstanding the above, Seller's infringement related indemnification obligations shall be extinguished and relieved if Seller, at its discretion and at its own expense (a) procures for Buyer the right, at no additional expense to Buyer, to continue using the Product; (b) replaces or modifies the Product so that it becomes non-infringing, provided the modification or replacement does not adversely affect the specifications of the Product; or (c) in the event (a) and (b) are not practical, refund to Buyer the amortized amounts paid by Buyer with respect thereto, based on a five (5) year amortization schedule. THE FOREGOING INDEMNIFICATION PROVISION STATES SELLER'S ENTIRE LIABILITY TO BUYER FOR THE CLAIMS DESCRIBED HEREIN.

8.2 By Buyer. Buyer shall indemnify, defend with competent and experienced counsel and hold harmless Seller, its parent, subsidiaries, affiliates and divisions, and their respective officers, directors, shareholders and employees, from and against any and all damages, liabilities, actions, causes of action, suits, claims, demands, losses, costs and expenses (including without limitation reasonable attorneys' fees and disbursements and court costs) to the extent arising from or in connection with (i) the negligence or willful misconduct of Buyer, its agents, employees, representatives or contractors; (ii) use of a Product in combination with equipment or software not supplied by Seller where the Product itself would not be infringing; (iii) Seller's compliance with designs, specifications or instructions supplied to Seller by Buyer; (iv) use of a Product in an application or environment for which it was not designed; or (v) modifications of a Product by anyone other than Seller without Seller's prior written approval.

9. SOFTWARE. With respect to any software products incorporated in or forming a part of the Products hereunder, Seller and Buyer intend and agree that such software products are being licensed and not sold, and that the words "purchase", "sell" or similar or derivative words are understood and agreed to mean "license", and that the word "Buyer" or similar or derivative words are understood and agreed to mean "licensee". Notwithstanding anything to the contrary contained herein, Seller or its licensor, as the case may be, retains all rights and interest in software products provided hereunder.

Seller hereby grants to Buyer a royalty-free, non-exclusive, nontransferable license, without power to sublicense, to use software provided hereunder solely for Buyer's own internal business purposes on the hardware products provided hereunder and to use the related documentation solely for Buyer's own internal business purposes. This license terminates when Buyer's lawful possession of the hardware products provided hereunder ceases, unless earlier terminated as provided herein. Buyer agrees to hold in confidence and not to sell, transfer, license, loan or otherwise make available in any form to third parties the software products and related documentation provided hereunder. Buyer may not disassemble, decompile or reverse engineer, copy, modify, enhance or otherwise change or supplement the software products provided hereunder without Seller's prior written consent. Seller will be entitled to terminate this license if Buyer fails to comply with any term or condition herein. Buyer agrees, upon termination of this license, immediately to return to Seller all software products and related documentation provided hereunder and all copies and portions thereof.

Certain of the software products provided by Seller may be owned by one or more third parties and licensed to Seller. Accordingly, Seller and Buyer agree that such third parties retain ownership of and title to such software products. The warranty and indemnification provisions set forth herein shall not apply to software products owned by third parties and provided hereunder.

10. LIMITATION OF LIABILITY. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, THE LIABILITY OF SELLER UNDER THESE TERMS AND CONDITIONS (WHETHER BY REASON OF BREACH OF CONTRACT, TORT, INDEMNIFICATION, OR OTHERWISE, BUT EXCLUDING LIABILITY OF SELLER FOR BREACH OF WARRANTY (THE SOLE REMEDY FOR WHICH SHALL BE AS PROVIDED UNDER SECTION 7 ABOVE)) SHALL NOT EXCEED AN AMOUNT EQUAL TO THE LESSER OF (A) THE TOTAL PURCHASE PRICE THERETOFORE PAID BY BUYER TO SELLER WITH RESPECT TO THE PRODUCT(S) GIVING RISE TO SUCH LIABILITY OR (B) ONE MILLION DOLLARS (\$1,000,000). NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF USE OF FACILITIES OR EQUIPMENT, LOSS OF REVENUE, LOSS OF DATA, LOSS OF PROFITS OR LOSS OF GOODWILL), REGARDLESS OF WHETHER SELLER (a) HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES OR (b) IS NEGLIGENT.

11. EXPORT RESTRICTIONS Buyer acknowledges that each Product and any related software and technology, including technical information supplied by Seller or contained in documents (collectively "Items"), is subject to export controls of the U.S. government. The export controls may include, but are not limited to, those of the Export Administration Regulations of the U.S. Department of Commerce (the "EAR"), which may restrict or require licenses for the export of Items from the United States and their re-export from other countries. Buyer shall comply with the EAR and all other applicable laws, regulations, laws, treaties, and agreements relating to the export, re-export, and import of any Item. Buyer shall not, without first obtaining the required license to do so from the appropriate U.S. government agency; (i) export or re-export any Item, or (ii) export, re-export, distribute or supply any Item to any restricted or embargoed country or to a person or entity whose privilege to participate in exports has been denied or restricted by the U.S. government. Buyer shall cooperate fully with Seller in any official or unofficial audit or inspection related to applicable export or import control laws or regulations, and shall indemnify and hold Seller harmless from, or in connection with, any violation of this Section by Buyer or its employees, consultants, agents, or customers.

12. MISCELLANEOUS. (a) Buyer may not delegate any duties nor assign any rights or claims hereunder without Seller's prior written consent, and any such attempted delegation or assignment shall be void. (b) The rights and obligations of the parties hereunder shall be governed by and construed in accordance with the laws of the State of Seller's manufacturing location, without reference to its choice of law provisions. Each party hereby irrevocably consents to the exclusive jurisdiction of the state and federal courts located in the county and state of Seller's manufacturing location, in any action arising out of or relating to this Agreement and waives any other venue to which it may be entitled by domicile or otherwise. (c) In the event of any legal proceeding between the Seller and Buyer relating to this Agreement, neither party may claim the right to a trial by jury, and both parties waive any right they may have under applicable law or otherwise to a right to a trial by jury. Any action arising under this Agreement must be brought within one (1) year from the date that the cause of action arose. (d) The application to this Agreement of the U.N. Convention on Contracts for the International Sale of Goods is hereby expressly excluded. (e) In the event that any one or more provisions contained herein shall be held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall remain in full force and effect, unless the revision materially changes the bargain. (f) Seller's failure to enforce, or Seller's waiver of a breach of, any provision contained herein shall not constitute a waiver of any other breach or of such provision. (g) Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals. (h) Buyer agrees that all pricing, discounts and technical information that Seller provides to Buyer are the confidential and proprietary information of Seller. Buyer agrees to (1) keep such information confidential and not disclose such information to any third party, and (2) use such information solely for Buyer's internal purposes and in connection with the Products supplied hereunder. Nothing herein shall restrict the use of information available to the general public. (i) Any notice or communication required or permitted hereunder shall be in writing and shall be deemed received when personally delivered or three (3) business days after being sent by certified mail, postage prepaid, to a party at the address specified herein or at such other address as either party may from time to time designate to the other.



EP Scientific Products are distributed by:

**Greyhound Chromatography
and Allied Chemicals**

6 Kelvin Park, Birkenhead, Merseyside CH41 1LT United Kingdom

Tel: (+44) 0 151 649 4000 Fax: (+44) 0 151 649 4001

Email: sales@greyhoundchrom.com

www.greyhoundchrom.com



© 2009 Thermo Fisher Scientific Inc. All rights reserved. Cubitainer is a registered trademark of Hedwin Corporation. Colilert is a trademark of Access Medical Systems Inc. Kynar is a trademark of Arkema Group. Tyvek, Tefzel, PFA and FEP are trademarks of E.I. du Pont de Nemours & Co.

All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.