

Scientific  
Products  
Catalog



Scientific Products  
*Where clean is critical™*



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# Introducing the EP Scientific Products Catalog



## PRODUCTS FOR ENVIRONMENTAL SAMPLING

Process Clean Sample Containers and  
Accessories for Environmental Sampling  
Applications (Pages 1-23)



## CRITICAL ENVIRONMENT PRODUCTS

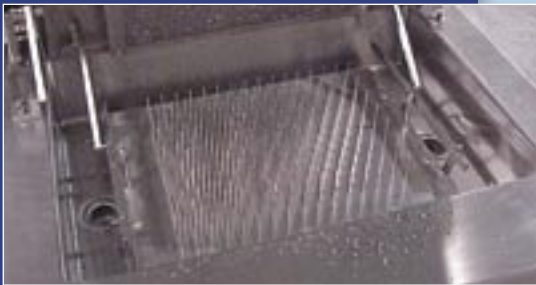
Low Particle, Low TOC, Depyrogenated  
and Clean Packaged Products for  
Critical Environments (Pages 24-33)

## TECHNICAL INFORMATION

Expanded Technical Information Section and  
A Guide To EP Custom Processing Services  
(Pages 34-55)

# The Ultimate Clean

*EP Scientific, the company known for meeting all of your most critical cleaning needs, introduces advanced processing of small containers.*



## ***Our New Cozzoli Washer provides:***

- Advanced automated washing of containers ranging from 1 mL to 100 mL
- Containers individually stem-washed to prevent water lock, the most common cause of poor cleaning for small opening vials
- Full validation information with each processed lot of containers
- Precision plate that positions each vial, saving process and dryer time for lower costs
- Heated Water for Injection yielding the highest degree of cleaning available and meeting the FDA cleaning requirements for parenteral drug product containers
- EP's state-of-the-art water purification system with industry-leading cleaning capabilities
- Automated process that allows effective cleaning for small to large runs



**Ask about EP Scientific's Custom Processing Capabilities 1.800.331.7425**



**Scientific Products**  
*Where clean is critical™*

# EP SCIENTIFIC PRODUCTS

RECOGNIZED FOR TWO DECADES AS THE STANDARD OF SERVICE AND INTEGRITY  
FOR CLEAN SAMPLE CONTAINERS IN EVERY ENVIRONMENT

**EP Scientific**, (formerly known as Eagle-Picher Scientific Products), 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.

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

In 1987, EP Scientific was 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, EP Scientific has 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.

EP Scientific has 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**

At EP Scientific, 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 of EP 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**

EP Scientific has been there for our customers right from the start. No other company can match our record of continuous performance in the environmental container industry. EP Scientific:

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



### Customized Products for New Applications and Markets

EP Scientific continues 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

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

At EP Scientific, 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 36 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

EP Scientific offers 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, EP Scientific can provide products meeting your specifications. Custom Ware™ is available by special order through EP Scientific customer service.

## BOSTON ROUND BOTTLES

NARROW MOUTH BOTTLES ARE PREFERRED FOR LIQUID SAMPLING

GLASSWARE

### 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 WELDED 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 welded PTFE/silicone septum included
- Welded 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



## WIDE MOUTH JARS

PREFERRED FOR SOLIDS AND SEMI-SOLIDS

GLASSWARE

### 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	24
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
Special Quote Only	317-10L	A	10L	120-400	1



### CLEAR STRAIGHT-SIDED JARS WITH WELDED 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 welded 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	CAP SIZE	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

### AMBER STRAIGHT SIDED JARS WITH WELDED 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 welded 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	51-400	24
142-02A/WS		B	60/2	51-400	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



GLASSWARE

## EPA VOA VIALS

RECOMMENDED FOR VOLATILE ORGANIC SAMPLING

GLASSWARE

### 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" 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" 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

GLASSWARE

### PREMIUM PACK OPEN TOP VIALS

- Available in clear or amber borosilicate glass
- Assembled with polypropylene caps with 0.060" or 0.125" 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" 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
- Pre-cleaned 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



## HDPE CONTAINERS

RECOMMENDED FOR CYANIDE, FLUORIDE AND METALS

PLASTICWARE

### 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	500
	356-125W/BR/BPS	125/4	24-410	500
	356-125W/BR/BP	125/4	24-410	500
157-250W/BR	357-250W/BR	250/8	28-410	24
157-250W/BR/BPC	357-250W/BR/BPC	250/8	28-410	330
	357-250W/BR/BPS	250/8	28-410	330
	357-250W/BR/BP	250/8	28-410	330
151-500W/BR	351-500W/BR	500/16	38-430	24
151-500W/BR/BPC	351-500W/BR/BPC	500/16	38-430	168
	351-500W/BR/BPS	500/16	38-430	168
	351-500W/BR/BP	500/16	38-430	168
150-01W/BR	350-01W/BR	960/32	38-430	12
150-01W/BR/BPC	350-01W/BR/BPC	960/32	38-430	200
	350-01W/BR/BPS	960/32	38-430	200
	350-01W/BR/BP	960/32	38-430	200



### 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	250
	370-08/WM/BPS	250/8	43-400	250
	370-08/WM/BP	250/8	43-400	250
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	116
	370-32/WM/BPS	960/32	43-400	116
	370-32/WM/BP	960/32	43-400	116



## HDPE 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	20-410	48
156-060W/BPC	356-060W/BPC	60/2	20-410	1000
	356-060W/BPS	60/2	20-410	1000
	356-060W/BP	60/2	20-410	1000
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	77
	350-01W/BPS	1L/32	28-410	77
	350-01W/BP	1L/32	28-410	77



PLASTICWARE

### 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	70
	310-2L/BPS	2L/64	38-400	70
	310-2L/BP	2L/64	38-400	70
111-4L	311-4L	4L/128	38-400	6
111-4L/BPC	311-4L/BPC	4L/128	38-400	48
	311-4L/BPS	4L/128	38-400	48
	311-4L/BP	4L/128	38-400	48

#### HDPE CAT # Suffix

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



## HDPE CONTAINERS

RECOMMENDED FOR CYANIDE, FLUORIDE AND METALS

PLASTICWARE

### 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	370
	356-125W/SS/BPS	125/4	70-400	370
	356-125W/SS/BP	125/4	70-400	370
151-500W/SS	351-500W/SS	500/16	89-400	24
151-500W/SS/BPC	351-500W/SS/BPC	500/16	89-400	144
	351-500W/SS/BPS	500/16	89-400	144
	351-500W/SS/BP	500/16	89-400	144
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	450
	356-125W/WM/BPS	125/4	38-400	450
	356-125W/WM/BP	125/4	38-400	450
157-250W/WM	357-250W/WM	250/8	48-400	24
157-250W/WM/BPC	357-250W/WM/BPC	250/8	48-400	230
	357-250W/WM/BPS	250/8	48-400	230
	357-250W/WM/BP	250/8	48-400	230
151-500W/WM	351-500W/WM	500/16	53-400	24
151-500W/WM/BPC	351-500W/WM/BPC	500/16	53-400	180
	351-500W/WM/BPS	500/16	53-400	180
	351-500W/WM/BP	500/16	53-400	180
150-01W/WM	350-01W/WM	1L/32	63-400	12
150-01W/WM/BPC	350-01W/WM/BPC	1L/32	63-400	72
	350-01W/WM/BPS	1L/32	63-400	72
	350-01W/WM/BP	1L/32	63-400	72
150-02W/WM	350-02W/WM	2L/64	100-400	6
150-02W/WM/BPC	350-02W/WM/BPC	2L/64	100-400	75
	350-02W/WM/BPS	2L/64	100-400	75
	350-02W/WM/BP	2L/64	100-400	75
150-04W/WM	350-04W/WM	4L/128	100-400	4
150-04W/WM/BPC	350-04W/WM/BPC	4L/128	100-400	57
	350-04W/WM/BPS	4L/128	100-400	57
	350-04W/WM/BP	4L/128	100-400	57



PLASTICWARE

### 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 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

CLOSURES

## OPEN TOP CAPS WITH WELDED 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



# VOC FIELD SAMPLING VIALS/FIELD KITS

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

SOIL SAMPLING

## VOC FIELD SAMPLING VIALS

EP Scientific has 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
PP141-40AEPSTB	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



**Ep** Scientific Products  
*Where clean is critical™*



**CRITICAL ENVIRONMENT PRODUCTS**

# EP SCIENTIFIC CLEAN PROCESS CONTAINERS AND SERVICES FOR CRITICAL ENVIRONMENTS

## CLASS 100/10 CLEANING SERVICES

### FOR BIOTECH/PHARMACEUTICAL AND SEMICONDUCTOR APPLICATIONS

EP Scientific has 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. EP Scientific can process containers from 100  $\mu$ L 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:

EP's 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. EP Scientific's 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 Customer Service at 800-331-7245 and ask for a technical representative for more details or complete the custom cleaning specification sheet located on page 36.

# CLEAN PROCESS CONTAINERS FOR CRITICAL ENVIRONMENTS

LOW PARTICLE CONTAINERS



## 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 < 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 CUSTOMER SERVICE DEPARTMENT OR CRITICAL ENVIRONMENT TEAM 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's 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. Each lot is tested and certified to contain < 20 particles per milliliter  $\geq$  0.3 microns. 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



LOW PARTICLE CONTAINERS

## PARTICLE-CERTIFIED FEP FLUOROPOLYMER CONTAINERS

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

Our class 100/10 cleaned containers are tested and certified to contain < 20 particles per milliliter  $\geq$  0.3 microns.

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)

### TOTAL ORGANIC CARBON (TOC) CERTIFIED VIALS

EP Scientific is currently offering 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



### 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

## DEPYROGENATED GLASS/ DEPYROGENATION SERVICE

EP Scientific provides 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.

EP Scientific can depyrogenate any glass as a service with our validated process. Cleaning and packaging is performed in a class 100/10 clean-room. 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



DEPYROGENATION

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	32 mL	12
123-80A/PF	Amber Glass Wide Mouth	80 mL	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	125 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





## 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**

EP Scientific offers 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.



CUSTOM SERVICES

## EP SCIENTIFIC SURFACE MODIFICATION PROCESSING

SILANIZED GLASSWARE

### EP SCIENTIFIC SILANIZED PRODUCTS

Applications:

- Trace organic analysis
- Storage of materials prone to adhering to glass
- Extraction glassware
- Medical-grade silicone for pharmaceutical use



### 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





# CUSTOM CLEAN CAPABILITIES FOR CRITICAL ENVIRONMENTS

**EP Scientific** has 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. EP Scientific 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 fewer than 5 particles per mL larger than 0.5 microns
  - Plastics – Certified to contain fewer than 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

EP Scientific 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

**Ep** Scientific Products  
*Where clean is critical™*



**TECHNICAL INFORMATION & CUSTOM SERVICES**



## CUSTOM PRODUCTS AND SERVICES

EP Scientific takes 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 36)
- Description of EP Scientific processing techniques (page 37-38)
- Dimensional data for stock containers (page 41-55)
- Process specifications (page 39)
- Certificate of Analysis data (page 40)
- Part number to page cross index (page 41-55)

If the information that you require is not included, please contact your local EP Scientific representative to take advantage of our two decades of experience in the processed container industry.





# CUSTOM CLEANING SPECIFICATION SHEET

CUSTOM PROCESSING

Company: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Customer sending materials for service only  EP 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. & Identification or EP Part # (if known)	Description (size, material, etc.)	Qty.

Use one sheet per item.

**Process Required or Requested\* (Some options not available for all container types)**

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Depyrogenation, validated 3-log reduction | <input type="checkbox"/> Particulate cleaning      | <input type="checkbox"/> WFI rinse (Containers < 250 mL)          |
| <input type="checkbox"/> Surface treatment (silanization)          | <input type="checkbox"/> Irradiation               | <input type="checkbox"/> USP purified rinse (containers > 250 mL) |
| <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"/> Other                     |   |

**Packaging Configurations:**

**Cleanroom bags**

- |   |                                     |
|---|-------------------------------------|
| <input type="checkbox"/> Individual unit                                | <input type="checkbox"/> Multi-unit |
| <input type="checkbox"/> Single   | <input type="checkbox"/> Double     |
| <input type="checkbox"/> Autoclave bag in cleanroom bag (closures only) |                                     |

- Options:  Autoclave bag (single, double, triple)  
 Foil-wrap # \_\_\_\_\_  Autoclave wrap x 2

**Clean polypropylene tray-pack**

- Shrink-wrapped with double bag; standard

Other packaging configurations (describe):

**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 Certificate of Compliance (only if EP provides materials) |  |  |
| <input type="checkbox"/> C of Sterility/USP        |  |  |  |

- Other tests or special documentation LIST:

Attach and return additional specifications as needed.

Method of shipment will be pre-paid collect, UPS ground or Yellow Freight, unless specified. Please record your preferred shipper and collect shipping number if other. \_\_\_\_\_

Minimum lead-time for custom product is dependent upon quantity, analytical requirements, and availability of materials. Please indicate your required in-house date. \_\_\_\_\_

**\*\*\*Attach purchase order and fax to Attn: Customer Service @ 1-800-331-7425\*\*\***

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_





# PROCESS DEFINITIONS

USE TABLE BELOW TO COMPLETE THE CUSTOM CLEANING SPECIFICATION SHEET

CUSTOM PROCESSING

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	EP Scientific uses 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

CUSTOM PROCESSING

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 <sup>-6</sup> . 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. EP Scientific sterilizes 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	EP Scientific uses 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 <sup>-6</sup> .	Injectable or parenteral drugs, lyophilization, final packaging prior to drug delivery, stability studies,	USP Sterility, Certificate of Process





# CERTIFICATIONS

## EP Scientific Purified Water Used for Final Rinses

### USP Purified Water: Container Sizes >250 mL

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

### USP Water for Injection (WFI): Containers ≤ 250 mL

	USP Specifications	Typical EP Values
TOC	<500 ppb	10-20 ppb
Conductivity	<1.3 µS/cm	0.06 µS/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 (µg/L) PLASTICS ONLY GROUP E			
COMPOUND	SPEC	CONTAINER SIZE	COMPOUND	SPEC	COMPOUND	SPEC
Particulates General 1	<5 pcs/mL @ 0.5 µm	>100 mL	Aluminum	<10	Potassium	<10
Particulates General 2	<10 pcs/mL @ 0.5 µm	20-100 mL	Calcium	<10	Magnesium	<10
Particulates General 3	<20 pcs/mL @ 0.5 µm	>20 mL	Copper	<10	Manganese	<10
Particulates General 4	<50 pcs/mL @ 0.5 µm	>125 mL	Iron	<10	Sodium	<10
			Particulates <50pcs/mL @ 0.2 µm			

LOW LEVEL METALS (µg/L) TEFLON GROUP F				TOC PARTICLE COMBINATION GLASS GROUP J			
COMPOUND	SPEC	COMPOUND	SPEC	COMPOUND	SPEC	COMPOUND	SPEC
Aluminum	<0.5	Potassium	<1.0	TOC	<1 ppm	Particles: pcs/mL @ 0.5 µm	<10
Calcium	<1.0	Lead	<0.5				
Copper	<0.5	Sodium	<1.0				
Iron	<1.0	Zinc	<0.5				

TOC GLASS GROUP M			TOC GLASS GROUP J			
COMPOUND		SPEC	COMPOUND	SPEC	COMPOUND	SPEC
TOC General 1		<10 ppb	TOC	<1 ppm	Particles: pcs/mL @ 0.5 µm	<10
TOC General 2		<20 ppb				

ENDOTOXIN GLASS GROUP N			ENDOTOXIN / PARTICLE COMBINATION GLASS GROUP K			
COMPOUND		SPEC	COMPOUND	SPEC	COMPOUND	SPEC
Endotoxin		< 0.06 ppb	Endotoxin	< .06	Particles:	<100
General		EU/mL		EU/mL	pcs/mL @0.5 µm	

PROCESS SPECIFICATIONS

# VOLATILE ORGANICS



<b>BOTTLE TYPE</b>	B	<b>QA LEVEL</b>	Level 1	<b>LOT NO</b>	B 6045040
<b>DESCRIPTION</b>	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

CERTIFICATE OF ANALYSIS

# new!

EP Scientific Products has expanded its 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.

## RNase/DNase-Free Certified Products from



**Scientific Products**  
*Where clean is critical*

### ***EP Scientific products capabilities include:***

- ***Depyrogenation***
- ***Low-particle cleaning***
- ***TOC certification (<10ppb)***
- ***WFI cleaning***
- ***Silanization***
- ***Siliconization***
- ***Custom processing, packaging and certification***
- ***Class 100 process area with Class 10 packaging***
- ***Sterilization by gamma irradiation, autoclave, dry heat***

*Contact the EP Scientific Critical Environment Team for more information about these products.*

