



DIAGNOSTICS PACKAGING

DESIGNED BY YOU. *CRAFTED BY US.*

DWK Life Sciences is your global 1 source, end-to-end solution for quality life science packaging, production-certified glass, plastic, and closures. These containers are configured to improve production efficiencies, simplify logistics and ensure packaging integrity. Our certified ready-to-use products improve workflow and reduce lead-time in the In Vitro Diagnostic (IVD) segment.

DWK Life Sciences' in vitro diagnostics products enable you to achieve your goals of detecting diseases, conditions, and infections in the laboratory and health professional and consumer settings.

We know that our products play a crucial role in maintaining the quality and reliability of your IVD products. Recent advances in reagents and related assay, control, and standard substances have increased the quality and performance requirements of primary packaging materials. For this reason, DWK offers products that incorporate strong barrier protection properties and impermeable seals to preserve the integrity of their contents and assure the accuracy of their results.



Focused Solutions	Packaged Content	Product Solutions
Immunology	Buffers & Reagents	Glass & Plastic Vials & Bottles
Molecular Biology	Standards & Conjugates	Closures, Caps, Seals, Stoppers
Cancer Markets	Antibodies & Proteins	Dropper Bottles, Tips & Closures
Clinical Chemistry	Substrates & Assays	Cleaning, Sterilization, Surface Treatment
Screening & Proteins	Stop Solutions	Labeling & Bar Coding

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A Customizable & Consultative Approach

Choose from our standard primary packages and closures and customize them with ready-to-use, sterilize, ready-to-ship and flexible configuration options.

Our products can be treated, labeled, configured, inventory matched, and drop-shipped to meet your JIT and run rate needs. By taking advantage of DWK Life Sciences products and premium services, you can:

- Improve your workflow through ready-to-use, inventory-matched kitting solutions
- Simplify your administrative effort through single-source & bundled procurement solutions
- Streamline inventory management & costs through automated just-in-time (JIT) stocking
- Reduce stock-out scenarios through flexible configurations matched to your run rate needs
- Ensure content integrity through USP-certified and dimensionally stable packaging components
- Satisfy your most demanding product & operational needs through experienced consultation

Visit us at www.dwk.com and request a consultation to discover how DWK Life Sciences can meet your primary packaging needs.

LEAK RESISTANT BOTTLES



Premium plastic bottles feature a superior double seal closure which is designed to be leak-resistant. The special no-drip pour lip ensures safe, clean pouring. The matching linerless closures are bagged separately and packaged with the bottles.

Product Highlights	
• Linerless closure has superior leak-resistant design	• Natural made in both HDPE and Polypropylene
• Excellent for both dry and liquid fills	• Methods of sterilization: gas and irradiation
• No-drip pour lip for safe and clean dispensing	• Opaque amber made of HDPE for use with light-sensitive applications
• Molded tamper-proofing bead for use with shrink band	• Custom configurations available upon request

Leak Resistant Bottle

- High or Low Density Polyethylene, or Polypropylene
- Amber or natural color
- Available in narrow or wide mouth



- Superior double seal closure for leak resistance
- No-drip pour lip for safe and clean pouring
- Polypropylene cap attached



Cat. No.	Size (oz)*	Size (mL)	Material	Color	Mouth Opening	Dia x H (mm)	Cap Size	Qty/Case
209041	.1	4	HDPE	Natural	Narrow	16 x 38	13-425	72
209121	.1	4	HDPE	Amber	Narrow	16 x 38	13-425	72
209161**	.1	4	PP	Natural	Narrow	16 x 38	13-425	72
208923	.3	8	LDPE	Natural	Narrow	25 x 43	20-410	72
209043	.3	8	HDPE	Natural	Narrow	25 x 43	20-410	72
209123	.3	8	HDPE	Amber	Narrow	25 x 43	20-410	72
209163**	.3	8	PP	Natural	Narrow	25 x 43	20-410	72
208924	.5	15	LDPE	Natural	Narrow	25 x 56	20-410	72
209044	.5	15	HDPE	Natural	Narrow	25 x 56	20-410	72
209124	.5	15	HDPE	Amber	Narrow	25 x 56	20-410	72
209164**	.5	15	PP	Natural	Narrow	25 x 56	20-410	72
208925	1	30	LDPE	Natural	Narrow	32 x 69	20-410	72
209045	1	30	HDPE	Natural	Narrow	32 x 69	20-410	72
209125	1	30	HDPE	Amber	Narrow	32 x 69	20-410	72
209165**	1	30	PP	Natural	Narrow	32 x 69	20-410	72
209425	1	30	LDPE	Natural	Wide	33 x 69	28-410	72
209545	1	30	HDPE	Natural	Wide	33 x 69	28-410	72
209625	1	30	HDPE	Amber	Wide	33 x 69	28-410	72
209665**	1	30	PP	Natural	Wide	33 x 69	28-410	72
208926	2	60	LDPE	Natural	Narrow	39 x 84	20-410	72
209046	2	60	HDPE	Natural	Narrow	39 x 84	20-410	72
209126	2	60	HDPE	Amber	Narrow	39 x 84	20-410	72
209166**	2	60	PP	Natural	Narrow	39 x 84	20-410	72
209546	2	60	HDPE	Natural	Wide	39 x 88	28-410	72
209626	2	60	HDPE	Amber	Wide	39 x 88	28-410	72
209666**	2	60	PP	Natural	Wide	39 x 88	28-410	72
208927	4	125	LDPE	Natural	Narrow	50 x 101	24-410	72
209047	4	125	HDPE	Natural	Narrow	50 x 101	24-410	72
209127	4	125	HDPE	Amber	Narrow	50 x 101	24-410	72
209167**	4	125	PP	Natural	Narrow	50 x 101	24-410	72
209427	4	125	LDPE	Natural	Wide	51 x 98	38-410	72
209547	4	125	HDPE	Natural	Wide	51 x 98	38-410	72
209627	4	125	HDPE	Amber	Wide	51 x 98	38-410	72
209667**	4	125	PP	Natural	Wide	51 x 98	38-410	72
208928	8	250	LDPE	Natural	Narrow	61 x 129	24-410	72
209048	8	250	HDPE	Natural	Narrow	61 x 129	24-410	72
209128	8	250	HDPE	Amber	Narrow	61 x 129	24-410	72
209168**	8	250	PP	Natural	Narrow	61 x 129	24-410	72
209428	8	250	LDPE	Natural	Wide	61 x 125	43-410	72
209548	8	250	HDPE	Natural	Wide	61 x 125	43-410	72
209628	8	250	HDPE	Amber	Wide	61 x 125	43-410	72
209668**	8	250	PP	Natural	Wide	61 x 125	43-410	72
209049	16	500	HDPE	Natural	Narrow	72 x 171	28-410	48
209129	16	500	HDPE	Amber	Narrow	72 x 171	28-410	48
209169**	16	500	PP	Natural	Narrow	72 x 171	28-410	48
209549	16	500	HDPE	Natural	Wide	72 x 164	53-410	48
209629	16	500	HDPE	Amber	Wide	72 x 164	53-410	48
209669**	16	500	PP	Natural	Wide	72 x 164	53-410	48
209050	32	1000	HDPE	Natural	Narrow	91 x 210	38-430	24
209130	32	1000	HDPE	Amber	Narrow	91 x 210	38-430	24
209170**	32	1000	PP	Natural	Narrow	91 x 210	38-430	24
209550	32	1000	HDPE	Natural	Wide	91 x 199	63-415	48
209630	32	1000	HDPE	Amber	Wide	91 x 199	63-415	48

* Approximate capacity **Autoclavable

Plastic Resins

Listed below are the primary resins used in the manufacture of our products. Following are some of the characteristics and features of these resins. Also listed is the Society of the Plastic Industry (SPI) resin identification code number.

High-Density Polyethylene (HDPE)

Flexible but more rigid than LDPE. The natural color is milky white, semi-translucent depending on density. Good impact strength and stress crack resistance. Good chemical resistance. Good vapor barrier but a poor gas barrier. Sterilizable via EtO or gamma radiation.



Low-Density Polyethylene (LDPE)

Very flexible, natural milky color, translucent with high impact strength. Excellent for mild and strong buffers, good chemical resistance. Good water vapor and alcohol barrier properties. Poor gas barrier, sterilizable with EtO or gamma radiation. Good stress crack and impact resistance.



Linear Low-Density Polyethylene (LLDPE)

Very flexible, natural milky color, translucent with high impact strength. Excellent for mild and strong buffers, good chemical resistance. Good water vapor and alcohol barrier properties. Poor gas barrier, sterilizable with EtO or gamma radiation. Good stress crack and impact resistance.



Polybutylene Terephthalate (PBT)

Good chemical resistance, clear color, water-resistant, weak acids and bases at room temperature. It can be sterilized by EtO and autoclaving at temperatures up to 180°C.



Polycarbonate (PC)

Rigid and strong with excellent clarity. High impact strength. Poor barrier properties.



Polyethylene Terephthalate (PET)

Semi-rigid to rigid depending on wall thickness. Natural color — clear and transparent. Good alcohol and solvent barrier; good gas and fair moisture barrier. Good to fair chemical barrier; not suitable for strong acids or bases. Good moldability. Sterilizable through EtO and gamma radiation. Good stress crack and impact resistance at room temperature and above.



Polyethylene Terephthalate Glycol (PETG)

Semi-rigid to rigid depending on wall thickness. Natural color — clear and transparent. Good alcohol and solvent barrier; fair gas and sound moisture barrier. Good to fair chemical barrier; not suitable for strong acids or bases. Good moldability. Sterilizable through EtO and gamma radiation. Good stress crack and impact resistance at room temperature and above.



Polypropylene (PP)

Rigid, solid, and durable in container or closure forms. Opaque, natural grayish-yellow in natural form. Excellent stress crack and impact resistance. Superior moisture barrier, good oil and alcohol barrier, poor gas barrier properties. Good chemical resistance. Sterilizable with EtO or autoclaving.



Polystyrene (PS)

PS is a transparent, rigid, and glass-like polymer. Good resistance to inorganic chemicals. Light and heat stable, biologically inert, and non-toxic. Poor impact and stress crack resistance, poor barrier properties. EtO or Gamma sterilizable.



Polyvinyl Chloride (PVC)

Flexible to rigid. Suitable for coatings; fair water and good oxygen barrier. Transparent to yellowish color in natural state. Good chemical resistance. Sterilizable by EtO. Good impact and some stress crack resistance. Poor recycling due to chloride residues.



PTFE, FEP, PFA

Polytetrafluoroethylene, fluorinated ethylene propylene, perfluoroalkoxy. All fluoropolymers feature opaque characteristics, excellent chemical resistance, good heat stability, and thermal shock resistance. All are autoclavable, heat, and gas sterilizable.



Typical Properties of Plastics

	HDPE	LDPE	LLDPE	PC	PET	PETG	PP	PS	PVC	PTFE
Max. Temp °C	120	80	50	135	60	70	135	70	70	240
Transparency	Translucent	Translucent	Translucent	Transparent	Transparent	Transparent	Translucent	Transparent	Translucent	Opaque
Sterilization**										
Autoclave	No	No	No	Yes	No	No	Yes	No	No	Yes
Gas	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dry Heat	No	No	No	No	No	No	No	No	No	Yes
Radiation	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
Disinfectants	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Density G/Cm3	0.95	0.92	0.92	1.19	1.33	1.27	0.90	1.06	1.34	2.15
Flexibility	Semi	Flex	Flex	Rigid	Semi	Semi	Rigid	Rigid	Rigid	Rigid
Brittleness Temp °C	< -75	< -75	-76	-135	-10	-40	0	+20	-30	-110
Tensile Strength, Psi	4000	2400	2000	9000	8000	7500	5000	6000	5000	4000

**Depends on thickness and relates to containers and closures. Because there are many grades of resins and processing methods, the above information should be used as a general guideline only.

Permeability of Plastics

	HDPE	LDPE	LLDPE	PC	PET	PETG	PP	PS	PVC	PTFE
N ₂	See Note 1	42	180	—	50	0.8	10	44	50	2
O ₂	See Note 1	150	500	—	250	5	25	90-140	185-485	4
CO ₂	See Note 1	580	2700	—	1000	15	125	650	1160	4
Moisture	See Note 2	0.3	1.3	—	7.4	2.0-4.0	0.5	0.3-0.7	8.5	1.0-5.0

Note 1: Units are cc x mil / 100 in² x day x atm @ 25°C

Note 2: Units are g x mil / 100 in² x day @ 38°C, 50 - 90% RH

Chemical Compatibility

	Container Materials								Closure Liner Materials					Closure Materials			
	Glass	HDPE	LDPE	PC	PET	PETG	PP	Al Foil	LDPE	Poly Vinyl	PTFE	SBR	Silicone	PBT	Phenolic	PP	Urea
Acetic Acid, Glacial	A	A	B	C	A	C	A	A	B	B	A	C	B	C	A	A	D
Acetone	A	D	D	D	C	D	B	A	D	D	A	D	B	D	A	B	A
Acetonitrile	A	A	A	D	B	C	A	A	A	D	A	B	D	—	A	A	—
Acrylonitrile	A	A	A	D	B	—	B	B	A	D	A	C	D	—	D	B	—
Ammonium Sulfide	A	A	A	D	—	—	A	D	A	A	A	B	A	—	A	A	C
Benzene	A	D	D	D	C	D	D	B	D	D	A	D	D	A	A	D	A
Bleach	A	A	B	B	C	C	B	D	B	A	A	D	B	C	D	B	—
Boric Acid	A	A	A	A	A	A	A	D	A	A	A	A	A	A	B	A	—
Carbonic Acid	A	A	A	A	—	A	A	B	A	A	A	B	A	B	—	A	—
Chlorobenzene	A	C	D	D	B	C	C	A	D	D	A	D	D	B	A	C	B
Chloroform	A	C	C	D	D	D	D	A	C	D	A	D	D	D	A	D	A
Dichloromethane (DCM)	A	C	D	D	D	D	C	D	D	D	A	D	D	D	C	C	B
Diethylamine	A	C	D	D	—	—	B	A	D	D	A	B	B	—	—	B	—
Dimethyl Formamide (DMF)	A	A	A	D	B	C	A	A	A	D	A	D	B	C	A	A	—
Dimethyl Sulfoxide (DMSO)	A	A	A	D	B	C	A	A	A	D	A	D	D	C	—	A	—
Dioxane	A	B	B	D	A	A	D	D	B	D	A	D	D	B	A	D	—
Ether	A	C	D	D	A	A	D	B	D	D	A	D	D	A	B	D	B
Ethyl Acetate	A	B	B	D	B	C	C	B	B	D	A	D	C	C	A	C	B
Ethyl Alcohol	A	A	A	A	A	A	A	B	A	B	A	A	B	A	B	A	A
Ethylene Glycol	A	A	A	A	A	A	A	B	A	A	A	A	A	A	B	A	B
Formaldehyde	A	A	A	A	B	A	A	A	A	C	A	B	B	A	B	A	A
Formic Acid 50%	A	A	B	B	—	—	A	C	B	B	A	B	C	A	C	A	D
Gasoline	A	C	D	C	B	B	C	A	D	D	A	D	D	A	B	C	A
Glycerine	A	A	A	A	—	A	A	A	A	C	A	A	B	A	A	A	—
Heptane	A	C	D	B	B	—	C	A	D	C	A	D	D	A	A	C	A
Hexane	A	B	D	C	C	B	B	A	D	D	A	D	D	A	B	B	—
Hydrochloric Acid (HCL) 50%	A	A	A	D	B	C	A	D	A	B	A	D	D	C	A	A	D
Hydrofluoric Acid (HF) 50%	D	A	A	D	C	D	A	D	A	C	A	D	D	C	D	A	D
Hydrogen Peroxide 50%	B	A	A	A	B	B	A	A	A	C	A	C	B	B	D	A	D
Iodine	A	C	D	C	A	—	C	A	D	C	A	B	A	D	—	C	—
Isopropyl Alcohol	A	A	A	A	A	A	A	A	A	B	A	B	A	A	A	A	—
Methyl Alcohol	A	A	A	B	B	A	A	A	A	C	A	A	A	B	B	A	A
Methyl Ethyl Ketone (MEK)	A	D	D	D	B	C	B	A	D	D	A	D	D	C	A	B	—
Methylene Chloride	A	C	D	D	D	D	C	D	D	D	A	D	D	D	C	C	B
Nitric Acid 50%	A	C	B	B	C	B	C	D	B	B	A	D	D	C	B	C	D
Pentane	A	C	C	A	—	—	D	A	C	D	A	D	D	B	—	D	—
Perchloric Acid 50%	B	B	B	D	B	C	B	D	B	D	B	D	D	—	—	B	—
Phenol 50%	A	D	D	D	D	D	D	A	D	C	A	D	D	D	A	D	—
Phosphoric Acid 50%	A	A	A	A	B	—	A	B	A	B	A	D	D	B	B	A	D
Picric Acid	A	D	D	D	B	—	D	A	D	D	A	B	D	D	A	D	D
Potassium Hydroxide	D	A	A	D	D	D	A	D	A	A	A	B	C	C	D	A	—
Sodium Hydroxide 50%	D	A	B	D	D	C	A	D	B	C	A	A	B	C	D	A	C
Sodium Peroxide	A	B	B	A	—	—	B	C	B	A	A	B	D	B	B	B	D
Sodium Thiosulfate	A	A	A	B	B	—	A	A	A	A	A	B	A	B	A	A	B
Sulfuric Acid 50%	A	A	A	B	B	C	B	C	A	C	A	D	D	B	C	B	D
Tetrahydrofuran (THF)	A	C	C	D	A	D	B	A	C	D	A	D	D	D	A	B	—
Toluene	A	C	C	D	C	C	C	A	C	C	A	D	D	D	A	C	—
Trifluoroacetic acid (TFA) 50%	A	A	B	D	A	—	—	A	A	—	—	D	—	—	A	—	—
Vegetable Oil	A	B	B	A	A	A	A	A	B	A	A	D	A	A	A	A	A
Xylene	A	C	D	D	C	—	D	A	D	D	A	D	D	C	A	D	B

(Tests conducted at room temp)

A - Resistant

B - Limited Resistance

C - Poor Resistance

D - Not Resistant

— - Unknown

Al Foil = aluminum foil

HDPE = high density polyethylene

LDPE = low density polyethylene

PBT = polybutylene terephthalate

PC = polycarbonate

PET = polyethylene terephthalate

PETG = polyethylene terephthalate glycol copolymer

PP = polypropylene

PTFE = polytetrafluoroethylene

SBR = styrene butadiene rubber

Although the information in this chart was acquired from reputable sources, it should only be used as a guide in selecting a container and closure system. Because so many factors can affect the chemical resistance of a material, in-house testing under actual conditions should be performed. WHEATON accepts no responsibility for the accuracy of this data or for any consequences resulting from its use.

Closure Liner Guide

PTFE Faced Silicone Rubber (PTFE / Silicone)

The liner consists of 0.005" thick PTFE bonded to 0.055" thick silicone rubber.

Ideal for low-temperature storage applications. PTFE facing provides an excellent chemical barrier. Autoclavable

Polyethylene Cone (PE Cone)

Manufactured from polyethylene (LDPE). The unique cone design provides a wedge-type seal that not only seals across the top but also across the inside diameter.

Unique problem-solving type of liner. This stress crack-resistant liner offers superior torque retention and excellent sealing characteristics. It is recommended that this liner be tested prior to use for leak seal.

Low-Density Polyethylene (LDPE) Disk

Manufactured from polyethylene. Good for distilled water, analytical standards and reagents.

PTFE Faced Foamed Polyethylene (PTFE / PE Foam)

PTFE faced foamed polyethylene liner offers the excellent chemical resistance of PTFE with the compressibility and sealing properties of polyethylene foam.

Typical applications: analytical lab samples, high purity chemicals, strong acids, solvents. Excellent for environmental samples, pharmaceuticals, and diagnostic reagents.

Pulp / Poly-Vinyl

One mil poly-vinyl film bonded to one mil HDPE on a #30 white pulp paper backing. Superior to plain pulp paper because it provides an excellent moisture barrier.

General-purpose: Suitable for a wide range of applications. Chemical resistance: Good for mild acids, alkalis, solvents, alcohols, oils, and aqueous products. Poor for active hydrocarbons and bleaches.

Pulp / Metal Foil

Aluminum foil bonded to pulp board. Good barrier properties and good resistance to hydrocarbons, oils, ketones, and alcohols. Not good for acids or alkalis.

Styrene-Butadiene Rubber (14B)

The 14B white rubber lining consists of homogeneous sulfur cured styrene-butadiene rubber. FDA Status complies with 21CFR 177.26, "Rubber articles intended for repeated use."

Excellent properties of resilience, resistant to moisture vapor. Satisfactory for most moderate chemicals. Not suitable for oils, strong acids, and hydrocarbons. Not a natural rubber. Autoclavable.

Foamed Polyethylene (PE Foam)

A one piece, three ply coextruded liner consisting of both foamed and solid LDPE. The foam core is sandwiched with solid clear PE.

General Purpose: Broad applications base. Chemical resistance-good for acids, alkalis, solvents, alcohols, oils, household cosmetics and aqueous products. Poor for hydrocarbon solvents. Liner provides tight seal.

Styrene-Butadiene Rubber / 0.005 PTFE (PTFE / Styrene-Butadiene)

The white rubber / 0.005" PTFE liner consists of virgin PTFE bonded to the white sulfur cured styrene-butadiene rubber. Complies with the FDA 21CFR 177.1550.

Designed for the ultimate in product safety. PTFE provides a totally inert inner seal and surface facing the sample or product. Autoclavable.

CRIMP / SERUM BOTTLES & VIALS



Product Highlights	
Plastic	Glass
• Made of Polypropylene (PP) or High-Density Polyethylene (HDPE)	• USP Type I clear and amber borosilicate glass
• Excellent resistance to stress cracks and impact	• Amber meets USP for UV light protection
• Virtually eliminates breakage	• Superior barrier properties with low extractables and pH stability
• Lightweight	• Highest resistance to thermal shock, making it applicable for Lyophilization (Freeze Drying)
• HDPE: Widely used for animal health products and storage of non-medical products	• Radiused corners and shoulders
• PP: Ideal for use in diagnostic kits	• Long-term seal integrity
• Methods of sterilization: PP: autoclave and EtO HDPE: EtO and irradiation	• Shrink-wrapped modules
• Custom configurations available upon request	• Methods of sterilization: autoclave, dry heat, and EtO
• Lot controlled	• Custom configurations available upon request
	• Lot controlled

Serum Tubing Vials



- 2 - 20mL size
- Clear vials manufactured from low extractable borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- Amber glass conforms to USP Type I requirements to protect light-sensitive samples
- Tubular design provides excellent clarity and dimensional consistency from vial to vial
- Specially designed bottom radius adds strength for lyophilization applications
- Lighter weight compared to molded bottles
- Shrink-wrapped modules reduce particulate contamination
- Autoclavable

Cat. No.	Size (mL)	Mouth ID x OD (mm)	Dia. x H	Qty / Case	Fits Rack
Clear Serum Vials					
223683	2	7 x 13	15 x 32	144	868804
223684	3	7 x 13	17 x 38	144	868810
223685	5	13 x 20	22 x 40	144	868805
223686	10	13 x 20	24 x 50	144	—
223687	20	13 x 20	30.5 x 58	120	—
Amber Serum Vials					
223693	2	7 x 13	15 x 32	144	868804
223695	5	13 x 20	22 x 40	144	868805
223696	10	13 x 20	24 x 50	144	—

Note: When selecting a rubber stopper or aluminum seal, match the mouth OD dimension of the vial.

Serum Bottle

- Ideal for long and short-term sample storage, lyophilization and vaccine / injectable drug containers
- Fits most lyophilization applications
- Borosilicate glass conforms to USP Type I requirements
- Clear bottles manufactured from WHEATON 400 borosilicate molded glass that conforms to USP Type I requirements
- Amber bottles manufactured from WHEATON 500 borosilicate glass that conforms to USP Type I requirements
- Shrink-wrapped partitioned modules reduce breakage

Cat. No.	Color	Size (mL)	Mouth ID x OD (mm)	Dia. x H (mm)	Fits Rack	Qty / Case
W223712	Clear	2	7 x 13	15.6 x 36	868810	288
223738	Clear	5	13 x 20	23 x 47	868805	288
223760	Amber	5	13 x 20	23 x 47	868805	288
223739	Clear	10	13 x 20	25 x 54	868806	288
223761	Amber	10	13 x 20	25 x 54	868806	288
223742	Clear	20	13 x 20	32 x 58	—	288
223762	Amber	20	13 x 20	32 x 58	—	288
223743	Clear	30	13 x 20	37 x 63	—	288
223763	Amber	30	13 x 20	37 x 63	—	288
223745	Clear	50	13 x 20	43 x 73	—	288
223764	Amber	50	13 x 20	43 x 73	—	288
223746	Clear	60	13 x 20	41 x 91	—	144
223747	Clear	100	13 x 20	52 x 95	—	144
223766	Amber	100	13 x 20	52 x 95	—	144
223748	Clear	125	13 x 20	54 x 107	—	144

*Note: Select aluminum seal and stopper size by using the mouth OD dimension of the bottle or vial

Serum Bottle, PVC Dropper Tip

- Create a dropper container using a crimp/serum bottle with 20mm mouth OD
- Dropper tip is made from PVC with HDPE closure
- Dispenses 40µL drop using water



Part. No.	Description	Dia. x H (mm)	Qty / Case
224080	PVC Dropper Tip	23 x 44	100

Vacule® Vial

- Heavy wall construction designed for lyophilization and freeze-drying applications
- Screw threads eliminate use of crimp seal
- Manufactured from WHEATON 33 low extractable clear borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- Vacule vials have controlled ID for accurate stopper fit
- Choice of solid or open-top screw cap
- 651905 and 651907 are supplied with unlined black phenolic cap



Cat. No.	Size (mL)	Dia. x H (mm)	Cap Finish Size	Fits Rack	Qty / Case
Vacule® Vial					
651954*	4	17 x 45	15-425	868810	200
651905	5	22 x 40	22-350	868805	200
651907	10	22 x 55	22-350	868805	200

Cat. No.	Description	Qty/Pack	Qty / Case
15-425 Screw Thread Caps and Stoppers for Cat. No. 651954			
224100-080	Red Rubber Stopper	100	1000
W224100-093	Lyophilization Stopper, 2-Leg	100	1000
240209	Cap, Solid Top, Rubber Liner	200	200
W240509	Cap, Open Top, without Liner	200	200
22-350 Screw Thread Caps and Stoppers for Cat. No. 651905 and 651907			
224100-172	Red Rubber Stoppers	100	1000
W224100-193	Lyophilization Stopper, 2-Leg	100	1000
W224100-202	Lyophilization Stopper, 3-Leg	100	1000
239853	Cap, Solid Top, without Liner	500	500

*Purchase closures separately



NEXTGEN™ V VIAL® HIGH RECOVERY VIALS



WHEATON® NextGen™ V Vials® are ideal for minor scale reactions, centrifugation, storage, packaging, and shipping vital samples. The conical interior provides downward drainage for maximum sample retrieval. Low particulate packaging protects against contamination during transportation and storage. Clear vials conform to USP Type 1 and ASTM E 438 Type 1, Class A requirements. Amber vials are made from amber borosilicate glass that conforms to USP Type 1 requirements for light transmission to protect light-sensitive products. Vials are available graduated or non-graduated, as well as with the option for screw thread or crimp/serum finish. Closures for either finish can be purchased separately.

The steep conical V interior bottom provides exceptional downward drainage while allowing maximum retrieval of contents by a syringe. V Vials are perfect for specialty pharma, biotech, pharmaceutical, and diagnostics packaging applications.

NextGen V Vials are manufactured from heavy wall, low extractable, borosilicate glass, providing excellent chemical resistance and durability during packaging and transportation.

Product Highlights	
• Conical interior provides maximum content retrieval	• Fire-glazed bottom reduces particulates in manufacturing process
• Heavy wall design for added safety and protection	• Bulk packaged in shrink-wrapped low particulate cellular trays
• USP Type I borosilicate glass	• Methods of sterilization: autoclave and dry heat
• Superior barrier properties with low extractables and pH stability	• Custom configurations available upon request
• Available in crimp/serum finish and screw thread finish	• Lot controlled

NextGen™ V Vials®



- Conical interior provides downward drainage for maximum sample retrieval
- Ideal for small-scale reactions, centrifugation, storage, packaging and shipping
- Low particulate packaging protects against contamination during transportation and storage
- Clear vials conform to USP Type I and ASTM E 438 Type I, Class A requirements
- Amber vials made from amber borosilicate glass that conforms to USP Type I requirements for light transmission to protect light-sensitive products
- Graduated or non-graduated
- Choose screw thread or crimp/serum finish
- Closures for crimp/serum finish vials can be purchased separately

Spin Vanes

- Magnetic stir bar for use with NextGen™ V Vials®
- Made from PTFE
- Place stir bar in the vial and use with magnetic stirrer



Cat. No.	Description	Qty / Case
903061	Fits 0.3 and 1.0 mL V Vials	6
903063	Fits 2, 3, 5 and 10 mL V Vials	6

Cat. No.	Color	Size (mL)	Graduated	Cap Style	Cap Material	Cap Color	Liner Material	Cap Size	Dia. x H (mm)	Qty / Case
W986281NG	Clear	0.1	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	8-425	12 x 35	12
W986211NG*	Clear	0.1	No	Crimp Top, purchase closure separately	—	—	—	11mm	12 x 32	12
W986273NG	Clear	0.3	Yes	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	13-425	13 x 35	12
W986253NG	Clear	0.3	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	13-425	13 x 35	12
W986282NG	Clear	0.3	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	8-425	12 x 35	12
W986283NG	Clear	0.3	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	13-425	13 x 35	12
W986293NG	Clear	0.3	Yes	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	13-425	13 x 35	12
W986212NG*	Clear	0.3	No	Crimp Top, purchase closure separately	—	—	—	11mm	12 x 32	12
W986213NG*	Clear	0.3	No	Crimp Top, purchase closure separately	—	—	—	13mm	13 x 32	12
W986274NG	Clear	1.0	Yes	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	13-425	13 x 44	12
W986254NG	Clear	1.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	13-425	13 x 44	12
W986284NG	Clear	1.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	13-425	13 x 44	12
W986294NG	Clear	1.0	Yes	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	13-425	13 x 44	12
W986334NG	Amber	1.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	13-425	13 x 44	12
W986354NG	Amber	1.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	13-425	13 x 44	12
W986314NG*	Amber	1.0	No	Screw Cap, purchase closure separately	—	—	—	13-425	13 x 41	12
W986214NG*	Clear	1.0	No	Crimp Top, purchase closure separately	—	—	—	13mm	13 x 41	12
W986276NG	Clear	2.0	Yes	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	15-415	17 x 61	12
W986272NG	Clear	2.0	Yes	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 44	12
W986256NG	Clear	2.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	15-415	17 x 61	12
W986261NG	Clear	2.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 44	12
W986288NG	Clear	2.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 44	12
W986298NG	Clear	2.0	Yes	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 44	12
W986336NG	Amber	2.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 44	12
W986356NG	Amber	2.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 44	12
W986316NG*	Amber	2.0	No	Screw Cap, purchase closure separately	—	—	—	20-400	20 x 41	12
W986216NG*	Clear	2.0	No	Crimp Top, purchase closure separately	—	—	—	20mm	20 x 40	12
W986277NG	Clear	3.0	Yes	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 50	12
W986257NG	Clear	3.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 50	12
W986287NG	Clear	3.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 50	12
W986297NG	Clear	3.0	Yes	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 50	12
W986217NG*	Clear	3.0	No	Crimp Top, purchase closure separately	—	—	—	20mm	20 x 46	12
W986279NG	Clear	5.0	Yes	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 65	12
W986259NG	Clear	5.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 65	12
W986289NG	Clear	5.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 65	12
W986299NG	Clear	5.0	Yes	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 65	12
W986339NG	Amber	5.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	20-400	20 x 65	12
W986359NG	Amber	5.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	20-400	20 x 65	12
W986319NG*	Amber	5.0	No	Screw Cap, purchase closure separately	—	—	—	20-400	20 x 62	12
W986219NG*	Clear	5.0	No	Crimp Top, purchase closure separately	—	—	—	20mm	20 x 61	12
W986260NG	Clear	10.0	No	Solid Top, Screw Cap	Phenolic	Black	PTFE / 14B Rubber	24-400	25.4 x 72	6
W986290NG	Clear	10.0	No	Open Top, Screw Cap	Phenolic	Black	PTFE / Silicone	24-400	25.4 x 72	6

* Purchase closures separately.

E-Z EX-TRACTION® HIGH RECOVERY VIALS



E-Z Ex-Traction Vials feature a revolutionary design that provides greater ease of handling, increased product recovery, and improved storage capacity. A patented outer bottom configuration differentiates it from other vials enabling easy use with racks and automated equipment. The bottom well is manufactured to tight tolerances with a constant depth and shape, critical for automated systems that irregularities in vial dimensions can damage. The interior walls transition smoothly into the conical well at the bottom, preventing the loss of product that irregularities would trap. In addition, the high recovery conical bottom ensures the increased retrieval of valuable products.

Product Highlights	
• Conical interior provides increased content retrieval over flat bottomed vials	• Shrink-wrapped modules in plastic corrugated trays to reduce particulate
• More economical than other high recovery vials	• Methods of sterilization: autoclave, EtO, and dry heat
• USP Type I borosilicate glass	• Custom configurations available upon request
• Screw thread finish for resealability	• Lot controlled
• Available in 2, 4, 8, 10, and 20 mL sizes	

E-Z Ex-Traction® Vials

- Conical well ensures maximum sample recovery
- Quality engineered for automated sample handling systems
- Excellent for chemical compound or biological sample storage
- Made from low extractable borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- Vials can be easily bar-coded using our customized services
- Screw caps can be purchased separately



Cat. No.	Color	Size (mL)	Size (dr)	Dia. x H (mm)	Cap Size	Qty / Case
W224601	Clear	2	.5	15 x 32	13-425	250
W224603	Clear	2	.5	15 x 32	13-425	1000
W224613	Clear	4	1	15 x 45	13-425	250
W224617	Clear	4	1	15 x 45	13-425	1000
W224618	Clear	8	2	16.75 x 60	15-425	250
W224619	Clear	8	2	16.75 x 60	15-425	1000
W224630	Clear	10	2.5	19 x 70	22-400	100
W224632	Clear	10	2.5	19 x 70	22-400	500
W224634	Clear	20	5	26.5 x 67	24-400	100
W224636	Clear	20	5	26.5 x 67	24-400	500

E-Z Ex-Traction® Vial Screw Caps

- Choice of black phenolic or white polypropylene screw caps
- PTFE faced (14B) styrene-butadiene rubber liner provides an inert inner seal and surface facing the sample or product
- Bonded PTFE-faced silicone liner ideal for storage of volatile solvents, sensitive compounds and corrosive chemicals
- Open top screw caps have a bonded PTFE-faced silicone liner that provides access with a syringe
- Pre-slit PTFE silicone liner easily pierced by liquid handling needles
- Can withstand autoclaving/sterilization



**Black Phenolic
Solid Top Cap**



**White Polypropylene
Open Top Cap**

Cat. No.	Cap Size	Cap Style	Cap Material	Color	Cap Liner	Qty / Pack	Qty / Case
W240820	13-425	Solid Top	Phenolic	Black	PTFE/14B Rubber	250	250
W240821	13-425	Solid Top	Phenolic	Black	PTFE/14B Rubber	250	1000
W240830	13-425	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	250	250
W240831	13-425	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	250	1000
W242710	13-425	Open Top	Polypropylene	Black	Bonded PTFE/Silicone	250	250
W240840	13-425	Open Top	Polypropylene	White	Bonded PTFE/Silicone	250	250
W240841	13-425	Open Top	Polypropylene	White	Bonded PTFE/Silicone	250	1000
W240848	13-425	Open Top	Polypropylene	Black	Pre-Slit Bonded PTFE/Silicone	250	250
W240849	13-425	Open Top	Polypropylene	Black	Pre-Slit Bonded PTFE/Silicone	250	1000
W240822	15-425	Solid Top	Phenolic	Black	PTFE/14B Rubber	250	250
W240823	15-425	Solid Top	Phenolic	Black	PTFE/14B Rubber	250	1000
W240832	15-425	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	250	250
W240833	15-425	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	250	1000
W240842	15-425	Open Top	Polypropylene	White	Bonded PTFE/Silicone	250	250
W240843	15-425	Open Top	Polypropylene	White	Bonded PTFE/Silicone	250	1000
W240850	15-425	Open Top	Polypropylene	Black	Pre-Slit Bonded PTFE/Silicone	250	250
W240851	15-425	Open Top	Polypropylene	Black	Pre-Slit Bonded PTFE/Silicone	250	1000
W240824	22-400	Solid Top	Phenolic	Black	PTFE/14B Rubber	100	100
W240825	22-400	Solid Top	Phenolic	Black	PTFE/14B Rubber	100	500
W240834	22-400	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	100	100
W240835	22-400	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	100	500
W240844	22-400	Open Top	Polypropylene	White	Bonded PTFE/Silicone	100	100
W240845	22-400	Open Top	Polypropylene	White	Bonded PTFE/Silicone	100	500
240418	24-400	Solid Top	Phenolic	Black	PTFE/14B Rubber	100	100
W240827	24-400	Solid Top	Phenolic	Black	PTFE/14B Rubber	100	500
W240836	24-400	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	100	100
W240837	24-400	Solid Top	Polypropylene	White	Bonded PTFE/Silicone	100	500
W240846	24-400	Open Top	Polypropylene	White	Bonded PTFE/Silicone	100	100
W240847	24-400	Open Top	Polypropylene	White	Bonded PTFE/Silicone	100	500

ALUMINUM SEALS, STOPPERS & CAPS



Unlined aluminum seals are used in conjunction with stoppers to provide a secure closure for serum bottles and vials. Aluminum seals are available in a wide range of styles.

Choosing the correct aluminum seal involves determining the size needed. Seal diameters should correspond to the mouth OD of the chosen container. Serum bottles and vials typically have a 13 or 20mm OD.

Product Highlights	
• Manufactured from lightweight aluminum	• Multiple colors for easy product identification
• Protects vial from contaminants	• 6 cap styles
• Method of sterilization: autoclave	• Custom configuration available upon request
• Lot controlled	

Aluminum Seals (Unlined)



- Wide range of styles and sizes
- Color selection includes natural, red, blue, and green
- Open top seals expose stopper for sample retrieval with a syringe
- Tear-off seal removes completely allowing content to pour from bottle
- Solid top seals are excellent for long-term storage of samples
- Flip cap seals provide tamper evidence

Cat. No.	For Mouth OD (mm)	Style	Color	Qty / Case
224176-01	11	Open Top	Natural	1000
224176-05	11	Open Top	Blue	1000
224176-06	11	Open Top	Red	1000
224176-07	11	Open Top	Green	1000
224189	11	Solid-Top	Natural	1000
224177-01	13	Open Top	Natural	1000
224177-05	13	Open Top	Blue	1000
224177-06	13	Open Top	Red	1000
224182-01	13	Center Disc Tear-Out	Natural	1000
224182-05	13	Center Disc Tear-Out	Blue	1000
224182-06	13	Center Disc Tear-Out	Red	1000
224182-07	13	Center Disc Tear-Out	Green	1000
224192-01	13	Complete Tear-Off	Natural	1000
224192-05	13	Complete Tear-Off	Blue	1000
224192-06	13	Complete Tear-Off	Red	1000
224192-07	13	Complete Tear-Off	Green	1000
224202	13	Flip Cap	Red	1000
W224207	13	Flip Cap Tear-Off	Red	1000
224178-01	20	Open Top	Natural	1000
224178-05	20	Open Top	Blue	1000
224178-06	20	Open Top	Red	1000
224178-07	20	Open Top	Green	1000
224183-01	20	Center Disc Tear-Out	Natural	1000
224183-05	20	Center Disc Tear-Out	Blue	1000
224183-06	20	Center Disc Tear-Out	Red	1000
224183-07	20	Center Disc Tear-Out	Green	1000
224191	20	Solid-Top	Natural	1000
224193-01	20	Complete Tear-Off	Natural	1000
224193-05	20	Complete Tear-Off	Blue	1000
224193-06	20	Complete Tear-Off	Red	1000
224193-07	20	Complete Tear-Off	Green	1000
224203	20	Flip Cap	Red	1000
W224205	20	Flip Cap	White	1000
224208	20	Flip Cap Tear-Off	Red	1000
224187-01	30	Center Disc Tear-Out	Natural	1000
224197-01	30	Complete Tear-Off	Natural	1000

Ultra Pure Stoppers



- Manufactured from an ultra-pure bromobutyl formulation with extremely high chemical purity and low gas permeability
- Free of latex, nitrosamines and 2-MCBT (2-mercaptobenzothiazole)
- Compatible with applications such as Water for Injection (WFI) where rubber extractables can cause problems
- Complies with US, European and Japanese Pharmacopeias

Straight Plug Stoppers

- Low level of extractables
- Autoclavable

Cat. No.	For Mouth ID x OD (mm)	Material Stopper	Durometer	Qty / Case
W224100-400	7 x 13	Gray Bromobutyl	47	1000
W224100-405	13 x 20	Gray Bromobutyl	47	1000

Lyophilization Stoppers

- Available in 2-Leg, 3-Leg and Igloo styles
- Demonstrates a shallow level of moisture adsorption
- Very low adsorption of the preservatives present in aqueous parenteral solutions
- Autoclavable

Cat. No.	For Mouth ID x OD (mm)	Material Stopper	Durometer	Qty / Case
2-Leg Lyophilization				
W224100-406	13 x 20	Gray Bromobutyl	46	1000
3-Leg Lyophilization				
W224100-407	13 x 20	Gray Bromobutyl	46	1000
Igloo Lyophilization				
W224100-402	7 x 13	Gray Bromobutyl	46	1000
W224100-408	13 x 20	Gray Bromobutyl	46	1000

Complete Coat Stoppers

- Stoppers are completely coated with a fluorinated polymer
- Manufactured in a silicone-free environment
- PTFE-like coatings prevents reactions due to sample contact with rubber
- Autoclavable

Cat. No.	For Mouth ID x OD (mm)	Material Stopper	Durometer	Qty / Case
Straight Plug Stopper				
W224100-420	7 x 13	Gray Bromobutyl	39	1000
W224100-421	13 x 20	Gray Bromobutyl	39	1000

Rubber Stoppers



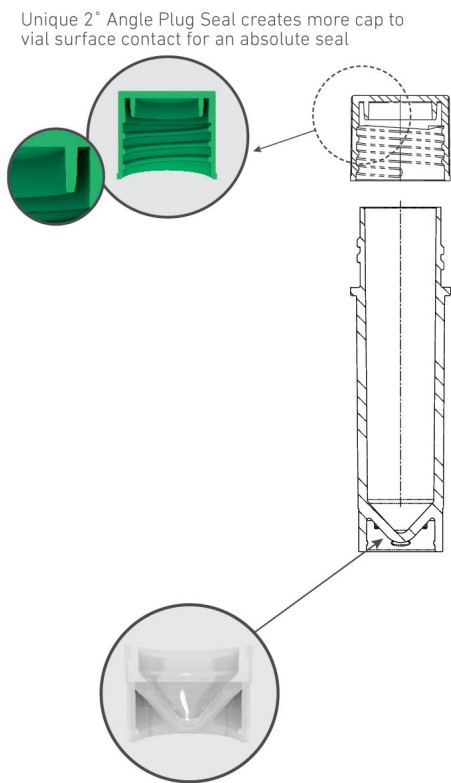
- Variety of styles, sizes, and rubber formulations
- Manufactured from the highest quality raw materials
- Components manufactured to yield exceptional dimensional stability
- Straight plug stoppers provide maximum sealing for vials with straight-wall glass finish
- Snap-on style provides maximum sealing for vials with a blow-back glass finish
- Sleeve style stoppers feature a fold-over skirt for sealing in serum finish vials without a crimp closure
- Autoclavable

Cat. No.	For Mouth ID x OD (mm)	Style	Stopper Material	*Durometer	Shelf Pack	Qty / Case
224100-020	5 x 11	Sleeve	Natural Red Rubber	39	100	1000
224100-070	7 x 13	Straight Plug	Natural Red Rubber	40	100	1000
224100-072	7 x 13	Straight Plug	Gray Chlorobutyl-Isoprene Blend/FEP Faced	40	100	1000
W224100-093	7 x 13	2-Leg Lyophilization	Gray Chlorobutyl	50	100	1000
224100-060	7 x 13	Sleeve	Natural Red Rubber	39	100	1000
224100-080	7 x 13	Snap-On	Natural Red Rubber	40	100	1000
W224100-081	7 x 13	Snap-On	Gray Chlorobutyl	55	100	1000
224100-170	10 x 20	Straight Plug	Natural Red Rubber	40	100	1000
224100-160	10 x 20	Sleeve	Natural Red Rubber	39	100	1000
224100-171	13 x 20	Straight Plug	Natural Pink Rubber	48	100	1000
224100-172	13 x 20	Straight Plug	Natural Red Rubber	45	100	1000
W224100-173	13 x 20	Straight Plug	Gray Chlorobutyl	46	100	1000
224100-174	13 x 20	Straight Plug	Gray Chlorobutyl-Isoprene Blend	40	100	1000
224100-175	13 x 20	Straight Plug	Gray Chlorobutyl-Isoprene Blend/FEP Faced	40	—	1000
224100-177	13 x 20	Straight Plug	Black FKM	55	—	100
224100-178	13 x 20	Straight Plug	Silicone	55	100	1000
W224100-195	13 x 20	Snap-On – Thin Flange	Gray Chlorobutyl	49	100	300
224100-192	13 x 20	2-Leg Lyophilization	Gray Chlorobutyl-Isoprene Blend	50	100	1000
W224100-193	13 x 20	2-Leg Lyophilization	Gray Chlorobutyl	46	100	1000
W224100-202	13 x 20	3-Leg Lyophilization	Gray Chlorobutyl	46	100	1000
224100-203	13 x 20	3-Leg Lyophilization – Thin Flange	Gray Chlorobutyl	55	—	300
224100-161	13 x 20	Sleeve	Natural Red Rubber	39	100	1000
224100-180	13 x 20	Snap-On	Natural Red Rubber	45s	100	1000
W224100-181	13 x 20	Snap-On	Gray Chlorobutyl	46	100	1000
224100-330	15 x 30	Straight Plug	Natural Red Rubber	40s	100	1000
224100-331	15 x 30	Straight Plug	Gray Bromobutyl	50	100	1000
224100-320	15 x 30	Sleeve	Natural Red Rubber	39	100	1000
W224100-342	15 x 30	Snap-On	Gray Bromobutyl	52	100	1000
W224100-282	20 x 28	2-Leg Lyophilization	Gray Chlorobutyl	46	100	1000

*Durometer is a measure of the resistance of a material to indentation. The higher the number, the greater the resistance. The Shore A scale is used for soft elastomers. The term durometer is often used to refer to the measurement and the instrument itself.

MICRO PACKAGING

ELITE® PACKAGING VIALS



E-Z Ex-Traction Conical Well Design provides controlled, low CV sample retrieval for both automated and manual liquid handling systems



Product Highlights	
Product is CE compliant to The European In Vitro Diagnostic Medical Devices Directive 98/79/EC	Exceeds DOT/IATA requirements for Diagnostic specimen Packing and Transportation Requirements
Vials and closures are non-cytotoxic and non-mutagenic and made from non-sterile low binding, virgin polypropylene	Conical well design allows for maximum content retrieval
Seal PSI exceeds 15psi/1 atmosphere/95kPA pressure test	Loctagon™ Vial Skirt provides stability in the freestanding position
External thread for aseptic technique & minimizing the risk of contamination	Red, Natural, and Green closure colors for easy sample or product identification. Other color options available upon request
Available in 0.5, 1.2, and 2.0mL capacities <i>*3mL, 4mL, and 5mL available upon request</i>	Non-Pyrogenic, Endotoxin Free and Lot Certified <0.500 EU/mL (Kinetic Turbidimetric LAL Method, FDA Guideline)

Freestanding, External Threaded Vial*

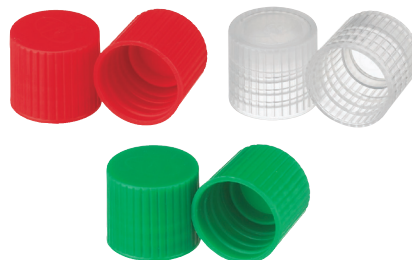
Catalog Number	W018021	W017005	W017006
Capacity (mL)	0.5	1.2	2
OD (mm)	12	12	12
Color	Natural	Natural	Natural
Material	PP	PP	PP
Height (mm)	49	37	49
Temperature Range	-156°C (vapor phase) to 121°C	-156°C (vapor phase) to +121°C	-156°C (vapor phase) to +121°C
Autoclavable	121°C, 15 psi (1 bar) for 20 minutes	121°C, 15 psi (1 bar) for 20 minutes	121°C, 15 psi (1 bar) for 20 minutes
Non-Cytotoxic & Non-Mutagenic	Yes	Yes	Yes
Skirted	Hex	Hex	Hex
Closure	Sold Separately	Sold Separately	Sold Separately
Closure Color	Red, Natural, Green	Red, Natural, Green	Red, Natural, Green
Pack Quantity	1000	1000	1000

*3mL, 4mL, and 5mL available upon request



13mm External Threaded ELITE® Linerless Cap with Molded Ring

Catalog Number	W017047	W017045	W017050
OD (mm)	12	12	12
Size (mm)	13	13	13
Closure Color	Red	Clear/Natural	Green
Material	PP	PP	PP
Non-Cytotoxic & Non-Mutagenic	Yes	Yes	Yes
Ridged Design for Easy On/Off	Yes	Yes	Yes
Pack Quantity	1000	1000	1000



MICRO PACKAGING

CRYOELITE® CRYOGENIC VIALS



WHEATON® CryoELITE® Cryogenic Vials offer an unrivaled cap seal for shipping and storing precious biosamples. The patented cap seal exceeds DOT and IATA regulations. Optional 2D Data Matrix Bar Code Inserts provide a unique identifier for traceability. The bottom format allows for an unrestricted view of the 2D bar code, convenient for automated scanning. Made from low binding, cryogenic grade virgin polypropylene, with Lot certified RNase / DNase and Endotoxin free certification, assuring product integrity. Colored caps allow for color-coding in conjunction with WHEATON color-coded KeepIT® Boxes..

Product Highlights	
• Unrivaled cap seal exceeds DOT and IATA regulations ensuring ultimate protection of samples during transportation and demanding freeze-thaw handling	• Lot certified RNase/DNase and Endotoxin Free providing assurance of product integrity
• Loctagon™ Vial Skirt provides stability in freestanding position	• Colored caps allow for color-coding projects along with WHEATON colored freezer and storage boxes

CryoELITE® Cryogenic Vials

- Lot certified RNase / DNase and endotoxin free and non-pyrogenic providing assurance for sample integrity
- Unrivaled cap seal exceeds DOT and IATA regulations ensuring ultimate protection of samples during transportation and demanding freeze-thaw handling
- Made from low binding, cryogenic grade virgin polypropylene
- Screw cap can be easily removed with one hand

Freestanding

- Loctagon™ Vial Skirt provides stability in freestanding position and locks into CryoELITE® Benchmate Rack in order to provide easy open and close with one hand
- Colored caps allow for color-coding projects along with WHEATON-colored freezer and storage boxes
- Optional 2D Data Matrix Bar Code Insert provides unique identifier for traceability
- Bottom format allows unrestricted view of 2D bar code for convenient automated scanning

Round Bottom

- Exacting round bottom allows for up to 17,000 MAX RCF (xG)



W985922
Freestanding
Internal Thread



W985872
Freestanding
External Thread

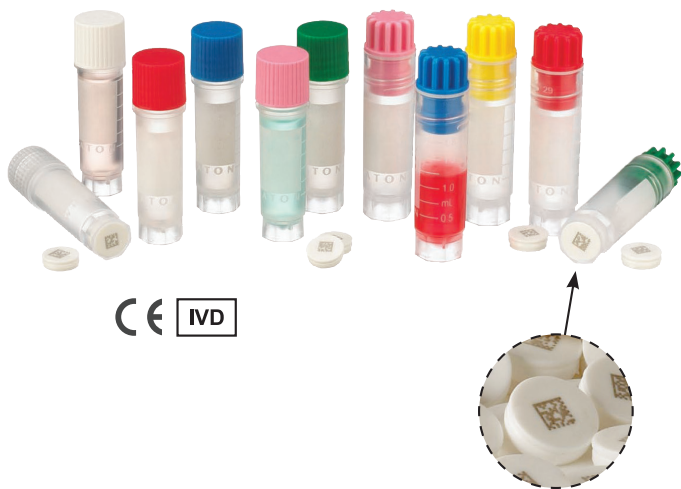


W985911
Round Bottom
Internal Thread



W985861
Round Bottom
External Thread

Cat. No.	Size (mL)	Color	Writing Patch	Sterile	Dia. x H (mm)	Case Qty
CryoELITE Vials, Freestanding, Internal Thread						
W985915	1.2	Natural	Yes	Yes	12 x 40	500
W985902	2	Natural	Yes	No	12 x 50	1000
W985903	2	Natural	No	No	12 x 50	1000
W985922	2	Natural	Yes	Yes	12 x 50	500
W985916	2	White	Yes	Yes	12 x 50	500
W985917	2	Red	Yes	Yes	12 x 50	500
W985918	2	Pink	Yes	Yes	12 x 50	500
W985919	2	Yellow	Yes	Yes	12 x 50	500
W985920	2	Green	Yes	Yes	12 x 50	500
W985921	2	Blue	Yes	Yes	12 x 50	500
W985923	3	Natural	Yes	Yes	12 x 63	500
W985924	4	Natural	Yes	Yes	12 x 77	500
W985925	5	Natural	Yes	Yes	12 x 91	500
CryoELITE Vials, Freestanding, External Thread						
W985874	0.5	White	Yes	Yes	12 x 49	500
W985862	1.2	Natural	Yes	Yes	12 x 37	500
W985883	1.2	White	Yes	Yes	12 x 37	500
W985884	1.2	Red	Yes	Yes	12 x 37	500
W985885	1.2	Pink	Yes	Yes	12 x 37	500
W985886	1.2	Yellow	Yes	Yes	12 x 37	500
W985887	1.2	Green	Yes	Yes	12 x 37	500
W985888	1.2	Blue	Yes	Yes	12 x 37	500
W985852	2	Natural	Yes	No	12 x 49	1000
W985853	2	Natural	No	No	12 x 49	1000
W985872	2	Natural	Yes	Yes	12 x 49	500
W985863	2	White	Yes	Yes	12 x 49	500
W985864	2	Red	Yes	Yes	12 x 49	500
W985865	2	Pink	Yes	Yes	12 x 49	500
W985866	2	Yellow	Yes	Yes	12 x 49	500
W985867	2	Green	Yes	Yes	12 x 49	500
W985868	2	Blue	Yes	Yes	12 x 49	500
W985869	3	Natural	Yes	Yes	12 x 63	500
W985870	4	Natural	Yes	Yes	12 x 78	500
W985871	5	Natural	Yes	Yes	12 x 93	500
CryoELITE Vials, Round Bottom, Internal Thread						
W985910	1.2	Natural	Yes	Yes	12 x 39	500
W985911	2	Natural	Yes	Yes	12 x 49	500
W985900	2	Natural	Yes	No	12 x 49	1000
W985901	2	Natural	No	No	12 x 49	1000
W985912	3	Natural	Yes	Yes	12 x 63	500
W985913	4	Natural	Yes	Yes	12 x 76	500
W985914	5	Natural	Yes	Yes	12 x 90	500
CryoELITE Vials, Round Bottom, External Thread						
W985860	1.2	Natural	Yes	Yes	12 x 35	500
W985861	2	Natural	Yes	Yes	12 x 49	500
W985850	2	Natural	Yes	No	12 x 49	1000
W985851	2	Natural	No	No	12 x 49	1000



E-Z Microtube

- Polypropylene
- Uniquely numbered to ensure zero duplicated
- Fully traceable for perfect data management
- For storage down to -196°C
- Long-lasting performance stability
- Supplied in a standard format 96-well rack with locking lid
- 1.0 and 1.4mL tubes supplied in standard twist-lock 96-well rack with locking lid



Cat. No.	Volume (mL)	Description	Qty / Case
W280110	0.5	E-Z Microtube, PP, 2D Barcode	10
W280121	1.0	E-Z Microtube, PP, 2D Barcode	10
W280135	1.4	E-Z Microtube, PP, 2D Barcode	10

CryoELITE® Cryogenic Vials Shelf Packs

- Packed in convenient smaller quantities
- Two packs of 50 vials

Cat. No.	Size (mL)	Color	Writing Patch	Sterile	Dimensions Dia. x H (mm)	Qty / Case
CryoELITE® Vials, Freestanding, External Thread						
W985863-100	2	White	Yes	Yes	12 x 49	100
W985864-100	2	Red	Yes	Yes	12 x 49	100
W985865-100	2	Pink	Yes	Yes	12 x 49	100
W985866-100	2	Yellow	Yes	Yes	12 x 49	100
W985867-100	2	Green	Yes	Yes	12 x 49	100
W985868-100	2	Blue	Yes	Yes	12 x 49	100
W985872-100	2	Natural	Yes	Yes	12 x 49	100

CryoELITE® Cryogenic Vials, Pre-inserted Barcodes

- CryoELITE vials w/ 2D Data Matrix Barcode insert already applied

Cat. No.	Size (mL)	Color	Writing Patch	Sterile	Dimensions Dia. x H (mm)	Qty / Case
CryoELITE® Vials, Freestanding, External Thread						
W985863-BC	2	White	Yes	Yes	12 x 49	500
W985864-BC	2	Red	Yes	Yes	12 x 49	500
W985865-BC	2	Pink	Yes	Yes	12 x 49	500
W985866-BC	2	Yellow	Yes	Yes	12 x 49	500
W985867-BC	2	Green	Yes	Yes	12 x 49	500
W985868-BC	2	Blue	Yes	Yes	12 x 49	500

2D Data Matrix Bar Code Bottom Insert

- When purchasing CryoELITE® freestanding vials, you can buy an optional 2D Data Matrix Bar Code Insert that allows immediate barcoding of your samples. The insert can be applied to the vial at a future date, which eliminates jeopardizing the integrity of your sample by transferring it to another vial.
- 2D Data Matrix Bar Code Insert press fits and locks into place in bottom of vial

Cat. No.	Description	Sterile	Shelf Pack	Qty / Case
W985881	2D Data Matrix Bar Code Bottom Insert	No	100	500

CryoELITE® Technical Information

Material:	Made from low binding, cryogenic grade virgin polypropylene
Temperature Range:	-156°C to +121°C, tested to -196°C
Sterility:	Lot Certified Sterile, Radiation Sterilization
DNase & RNase Free:	Lot Certified, Ethidium Bromide (EtBr) Agarose Gel Electrophoresis Analysis
Non-Pyrogenic, Endotoxin Free:	Lot Certified < 0.500 EU/mL (Kinetic Turbidimetric LAL Method, FDA guideline)
Seal psi:	Exceeds 15 psi / 1 atmosphere / 95kPa pressure tested
IATA (International Air Transportation Association):	Can be used as a primary receptacle for the Transport of Diagnostic Specimens as outlined by the IATA Dangerous Goods Regulations, Part 6.3.5
DOT (U.S. Department of Transportation):	Exceeds U.S. DOT 49 CFR Parts 171-180 requirements for Diagnostic Specimen Packing and Transportation Requirements
Liquid Nitrogen:	Liquid phase tested / Vapor phase accepted
Autoclavable:	Recommended at +121°C, 15 psi (1 bar) for 20 minutes
Cap Pigmentation:	Cap colors were chosen to ensure no reactivity with common biological samples
2D Data Matrix Capacity:	Numeric 16 / Alphanumeric 10
2D Data Matrix Symbol Size:	Row x Column: 14 x 14
CE :	Product is CE compliant to The European <i>In Vitro</i> Diagnostic Medical Devices Directive 98/79/EC

KeepIT® Freezer Boxes



KeepIT®-25



KeepIT®-81 & 100

- KeepIT® Freezer Boxes provide an ideal method for batching and storing samples
- Six different colors match the colors of CryoELITE® Cryogenic Vials, creating alternatives for batching and identifying groups of samples
- KeepIT®-25 accommodates up to 25 internal or external threaded cryogenic Vial Sizes: 1.2 - 2mL
- KeepIT®-100 accommodates up to 100 internal threaded cryogenic vials and the KeepIT®-81 accommodates 81 external threaded cryogenic vials (sizes: 1.2 - 2mL)
- Openings in bottom facilitate scanning CryoELITE® 2D Data Matrix Bar Code Inserts
- Made from Eastman Tritan™ BPA free, shatter resistant resin
- Standard footprint compatible with liquid nitrogen storage shelves and freezer drawers

Cat. No.	Color	Dimensions (L x W x H) (mm)	Qty / Case
KeepIT®-25 For External Thread Vials			
W651702-W	White	75 x 75 x 52	10
W651702-R	Red	75 x 75 x 52	10
W651702-P	Pink	75 x 75 x 52	10
W651702-Y	Yellow	75 x 75 x 52	10
W651702-G	Green	75 x 75 x 52	10
W651702-B	Blue	75 x 75 x 52	10
Low Profile KeepIT®-81 For External Thread Vials			
W651703-W	White	130 x 130 x 52	10
W651703-R	Red	130 x 130 x 52	10
W651703-P	Pink	130 x 130 x 52	10
W651703-Y	Yellow	130 x 130 x 52	10
W651703-G	Green	130 x 130 x 52	10
W651703-B	Blue	130 x 130 x 52	10
Low Profile KeepIT®-100 For Internal Thread Vials			
W651704-W	White	130 x 130 x 52	10
W651704-R	Red	130 x 130 x 52	10
W651704-P	Pink	130 x 130 x 52	10
W651704-Y	Yellow	130 x 130 x 52	10
W651704-G	Green	130 x 130 x 52	10
W651704-B	Blue	130 x 130 x 52	10

CryoELITE® Benchmate Rack



- For use with both freestanding and round bottom vials
- One hand cap removal of freestanding vials
- Holds 50 cryogenic vials
- Manufactured from polypropylene
- Easily cleaned in an automatic washer or autoclavable at 121°C for 20 minutes
- Non-skid feet offer additional stability for bench work
- Stackable
- Well ID: 12.5mm
- Dimensions (L x W x H): (190 x 100 x 22mm)

Cat. No.	Description	No. of Wells	Qty / Case
W985810	50-Position Rack	5 deep x 10 wide	5

CryoFile® and CryoFile® XL Storage Boxes



- Use with cryogenic vials
- Partitions numbered from 1 – 81 for easy content identification
- Numbering system printed on lid and bottom of box
- Six colors provide easy sample identification
- Water repellent allows for longer durability
- For use with vapor phase of liquid nitrogen
- Directional holes in bottom allow for drainage and orientation of bottom to top of box
- Dimensions (L x W x H): CryoFile® (130 x 130 x 53mm) / CryoFile® XL (130 x 130 x 97mm) CryoFile® Tissue Box (130 x 130 x 26mm)

Cat. No.	Fits	Color	Qty / Case
CryoFile® Storage Box			
W651600	1.2 & 2mL Vials	Green	15
W651601	1.2 & 2mL Vials	Yellow	15
W651602	1.2 & 2mL Vials	Pink	15
W651603	1.2 & 2mL Vials	White	15
W651604	1.2 & 2mL Vials	Blue	15
W651605	1.2 & 2mL Vials	Red	15
CryoFile® XL Storage Box			
W651600-XL	3, 4 & 5mL Vials	Green	15
W651601-XL	3, 4 & 5mL Vials	Yellow	15
W651602-XL	3, 4 & 5mL Vials	Pink	15
W651603-XL	3, 4 & 5mL Vials	White	15
W651604-XL	3, 4 & 5mL Vials	Blue	15
W651605-XL	3, 4 & 5mL Vials	Red	15
CryoFile® Tissue Storage Box (holds 25 Tissue Vials)			
W651610-G	5mL Tissue Vials	Green	15
W651610-Y	5mL Tissue Vials	Yellow	15
W651610-P	5mL Tissue Vials	Pink	15
W651610-W	5mL Tissue Vials	White	15
W651610-B	5mL Tissue Vials	Blue	15
W651610-R	5mL Tissue Vials	Red	15

MICRO PACKAGING

CHROMATOGRAPHY VIALS, INSERTS, CAPS & SEALS



WHEATON® Chromatography Vials and accessories are designed for trouble-free operation in most autosamplers. 12 x 32 autosampler vials are offered in crimp, snap/crimp, and screw cap finishes for use in both GC and HPLC applications. Closures are available in various colors and septa materials to ensure chemical compatibility with your sample. For micro sampling, WHEATON has a selection of limited volume inserts.

Product Highlights	
• Purchase vials and caps separately or together in convenience bulk packs	• Multiple color choices available for aluminum seals and snap caps
• Snap ring vials improve workflow by eliminating the need for crimping and decapping tools	• Limited volume ensures maximum retrieval of contents without the hassle of removable inserts

E-Z Vial® 12 x 32mm Crimp Top

(Available in Convenience Packs)



225174 225173 225175 225172

- 40% larger opening improves sample accessibility while reducing autosampler needle damage
- Manufactured from Type I borosilicate glass
- Purchase vials and caps separately or together in convenience packs
- Available with or without writing patch

Cat. No.	Size (mL)	Description	Qty / Case
E-Z Vial			
225175	1.8	Clear	1000
225174	1.8	Clear w/ Writing patch	1000
225172	1.8	Amber	1000
225173	1.8	Amber w/ Writing patch	1000

Standard Opening Crimp Vial 12 x 32mm



223692 223682 223692-01 223682-01

- Original design used in most autosamplers
- Manufactured from Type I borosilicate glass
- Available with or without writing patch
- Limited volume inserts available separately

Cat. No.	Size (mL)	Description	Qty / Case
Standard Crimp Vial			
223682	1.5	Clear	1000
223682-01	1.5	Clear, with Writing Patch	1000
223692	1.5	Amber	1000
223692-01	1.5	Amber, with Writing Patch	1000

High Recovery Vial 12 x 32mm

- Reactions and concentrations can be performed directly in sampling vial, eliminating the need for sample transfer
- Conical bottom ensures maximum retrieval of contents
- Manufactured from Type I borosilicate glass
- Ideal for use in autosamplers
- Purchase 11mm Aluminum E-Z Seals™ separately



Cat. No.	Size (mL)	Description	Cap Size	Qty / Case
W225171	1.5	Clear	11mm	100

Limited Volume Inserts

(For E-Z Vials® with Wide Opening)



225350-631 225265 225255 225257

Cat. No.	Size (mL)	Description	Qty / Case
Limited Volume Inserts (Pictured with Vial)			
225255	0.10	Glass Insert with Top Spring	200
225265	0.25	Glass Insert with Bottom Spring	100
225257	0.25	Polypropylene Insert w/ Bottom Spring	100
225350-631	0.35	Glass Flat Bottom Insert	1000

Limited Volume Inserts

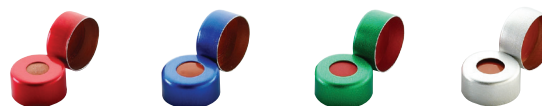
(For Standard Opening Vials)



225350-531 225260

Cat. No.	Size (mL)	Description	Qty / Case
Limited Volume Insert (Pictured with Vial)			
225260	0.10	Glass Insert with Bottom Spring	100
225350-531	0.25	Glass Flat Bottom Insert	1000

E-Z Seals™ 11mm Aluminum



- For use with 12 x 32mm crimp top vials
- Large target diameter
- Seals available in 4 colors
- Choice of liner

Cat. No.	Description	Shelf Pack	Qty / Case
With Natural PTFE / Red Silicone			
224211-01	Natural Aluminum	100	1000
224211-05	Blue Aluminum	100	1000
224211-06	Red Aluminum	100	1000
224211-07	Green Aluminum	100	1000
With Natural PTFE / Natural Silicone Liner			
224219-01	Natural Aluminum	100	1000
224219-05	Blue Aluminum	100	1000
224219-06	Red Aluminum	100	1000
224219-07	Green Aluminum	100	1000
With Red PTFE / Natural Silicone / Red PTFE Liner			
224231-01	Natural Aluminum	100	1000
224231-05	Blue Aluminum	100	1000
224231-06	Red Aluminum	100	1000
224231-07	Green Aluminum	100	1000
With PTFE / Gray Butyl Liner			
224235-01	Natural Aluminum	100	1000

ValuePak Autosampler Vials, Crimp Top

- Vials are packaged 100 per shelf pack and ten packs per case
- Manufactured from certified clear and amber Type I borosilicate glass
- 40% larger opening improves sample accessibility while reducing autosampler needle damage

Cat. No.	Size (mL)	Description	Qty / Case
E-Z Vial® with Aluminum Crimp Top Seal with PTFE / Red Rubber Liner			
W225164	1.8	Clear	1000
W225165	1.8	Clear with Writing Patch	1000
W225166	1.8	Amber	1000
W225167	1.8	Amber with Writing Patch	1000



W225164



W225165



W225166



W225167

E-Z Vial® 12 x 32mm Crimp Top Convenience Packs (12 x 32mm Crimp Top Vial with 11mm E-Z Seal™)

Cat. No.	Vial	Seal Color	Septum	Qty / Case	Vial Cat. No.	Seal Cat. No.
W225175-01	Clear	Natural	PTFE / Red Rubber	100	225175	224211-01
W225175-0103	Clear	Red	PTFE / Red Rubber	100	225175	224211-05
W225175-0104	Clear	Blue	PTFE / Red Rubber	100	225175	224211-06
W225175-0107	Clear	Green	PTFE / Red Rubber	100	225175	224211-07
W225175-02	Clear	Natural	PTFE / Silicone	100	225175	224219-01
W225175-0203	Clear	Red	PTFE / Silicone	100	225175	224219-05
W225175-0204	Clear	Blue	PTFE / Silicone	100	225175	224219-06
W225175-0207	Clear	Green	PTFE / Silicone	100	225175	224219-07
W225175-0303	Clear	Red	PTFE / Silicone / PTFE	100	225175	224231-05
W225175-0304	Clear	Blue	PTFE / Silicone / PTFE	100	225175	224231-06
W225174-01	Clear with Patch	Natural	PTFE / Red Rubber	100	225174	224211-01
W225174-0103	Clear with Patch	Red	PTFE / Red Rubber	100	225174	224211-05
W225174-0104	Clear with Patch	Blue	PTFE / Red Rubber	100	225174	224211-06
W225174-0107	Clear with Patch	Green	PTFE / Red Rubber	100	225174	224211-07
W225174-02	Clear with Patch	Natural	PTFE / Silicone	100	225174	224219-01
W225174-0203	Clear with Patch	Red	PTFE / Silicone	100	225174	224219-05
W225174-0204	Clear with Patch	Blue	PTFE / Silicone	100	225174	224219-06
W225174-0207	Clear with Patch	Green	PTFE / Silicone	100	225174	224219-07
W225174-0303	Clear with Patch	Red	PTFE / Silicone / PTFE	100	225174	224231-05
W225174-0304	Clear with Patch	Blue	PTFE / Silicone / PTFE	100	225174	224231-06
W225172-01	Amber	Natural	PTFE / Red Rubber	100	225172	224211-01
W225172-0103	Amber	Red	PTFE / Red Rubber	100	225172	224211-05
W225172-0104	Amber	Blue	PTFE / Red Rubber	100	225172	224211-06
W225172-0107	Amber	Green	PTFE / Red Rubber	100	225172	224211-07
W225172-02	Amber	Natural	PTFE / Silicone	100	225172	224219-01
W225172-0203	Amber	Red	PTFE / Silicone	100	225172	224219-05
W225172-0204	Amber	Blue	PTFE / Silicone	100	225172	224219-06
W225172-0207	Amber	Green	PTFE / Silicone	100	225172	224219-07
W225172-0303	Amber	Red	PTFE / Silicone / PTFE	100	225172	224231-05
W225172-0304	Amber	Blue	PTFE / Silicone / PTFE	100	225172	224231-06
W225173-01	Amber with Patch	Natural	PTFE / Red Rubber	100	225173	224211-01
W225173-0103	Amber with Patch	Red	PTFE / Red Rubber	100	225173	224211-05
W225173-0104	Amber with Patch	Blue	PTFE / Red Rubber	100	225173	224211-06
W225173-0107	Amber with Patch	Green	PTFE / Red Rubber	100	225173	224211-07
W225173-02	Amber with Patch	Natural	PTFE / Silicone	100	225173	224219-01
W225173-0203	Amber with Patch	Red	PTFE / Silicone	100	225173	224219-05
W225173-0204	Amber with Patch	Blue	PTFE / Silicone	100	225173	224219-06
W225173-0207	Amber with Patch	Green	PTFE / Silicone	100	225173	224219-07
W225173-0303	Amber with Patch	Red	PTFE / Silicone / PTFE	100	225173	224231-05
W225173-0304	Amber with Patch	Blue	PTFE / Silicone / PTFE	100	225173	224231-06

LVI™ Vials 12 x 32mm Crimp Top



225221-01 225220-01

- Borosilicate glass vial with 300µL glass limited volume insert
- Limited Volume Insert is fused to vial, which prevents needle damage
- Writing patch on all vials
- Purchase vials and caps separately or together in convenience packs

Cat. No.	Size (mL)	Description	Qty / Case
LVI Vial			
225220-01	0.3	Clear with Writing Patch	100
225221-01	0.3	Amber with Writing Patch	100



E-Z Seals™ 11mm Aluminum
(see page 27)

LVI™ Vials 12 x 32mm Crimp Top Convenience Packs

- 12 x 32mm LVI™ Vial & 11 mm Aluminum E-Z Seal™
- Choose a clear or amber glass vial
- Writing patch on all vials

Cat. No.	Vial	Seal Color	Septum	Qty / Case	Vial Cat. No.	Seal Cat. No.
W225223-01	Clear with Patch	Natural	PTFE / Red Rubber	100	225220-01	224211-01
W225225-01	Amber with Patch	Natural	PTFE / Red Rubber	100	225221-01	224211-01

E-Z Vial® with Snap Ring 12 x 32mm

(Available in Convenience Packs)



225179 225179-02 225179-01 225179-03

- Snap ring vials eliminate the need for crimping and decapping tools
- Vials accept snap cap or 11 mm aluminum seal
- 40% larger opening improves sample accessibility while reducing auto sampler needle damage
- Clear or amber Type I borosilicate glass

Cat. No.	Size (mL)	Description	Qty / Case
E-Z Vial with Snap Ring			
225179	1.8	Clear	1000
225179-01	1.8	Clear with Writing Patch	1000
225179-02	1.8	Amber	1000
225179-03	1.8	Amber with Writing Patch	1000

11mm Snap Caps



242786-04 242786-05 242786-01 242786-02 242786

- Eliminate the need for crimping and decapping tools
- Fits the WHEATON® E-Z Vials® with Snap Ring top
- Manufactured from polyethylene
- Choose from 5 colored caps and a variety of septa

Cat. No.	Description	Shelf Pack	Qty / Case
With PTFE / Red Rubber Septa			
242786	Natural Cap	100	1000
242786-01	Blue Cap	100	1000
242786-02	Green Cap	100	1000
242786-04	Red Cap	100	1000
242786-05	Yellow Cap	100	1000
With PTFE / Silicone Septa			
242775	Natural Cap with Cross Slit	100	1000
242776	Natural Cap	100	1000
242776-01	Blue Cap	100	1000
242776-02	Green Cap	100	1000
242776-04	Red Cap	100	1000
242776-05	Yellow Cap	100	1000
With Red PTFE / Silicone / Red PTFE Septa			
242772	Natural Cap	100	1000
242772-01	Blue Cap	100	1000
242772-02	Green Cap	100	1000
242772-04	Red Cap	100	1000
242772-05	Yellow Cap	100	1000
242772-06	Natural Cap with Star Slit	100	1000
With PTFE Septa			
242782	Natural Cap	100	1000

Limited Volume Inserts

(For Snap Ring Vials)



225255 225265 225257 225350-631

- Available with or without writing patch
- Glass and polypropylene limited volume inserts
- Purchase vials and snap caps separately or together in convenience packs
- Packaged in shrink-wrapped trays of 100 for convenience and cleanliness

Cat. No.	Size (mL)	Description	Qty / Case
Limited Volume Inserts (Pictured with Vial)			
225255	0.10	Glass Insert with Top Spring	200
225265	0.25	Glass Insert with Bottom Spring	100
225257	0.25	Polypropylene Insert w/ Bottom Spring	100
225350-631	0.35	Glass Flat Bottom Insert	1000

12 x 32mm Polypropylene Vial with Insert



225180 W225187 225235

- Economical alternative to glass
- Manufactured from chemical-resistant polypropylene
- Vials are packaged 100 per shelf pack and ten packs per case
- Conical interior ensures maximum retrieval of contents without the hassle of removable inserts

Cat. No.	Insert Size	Closure Style	Closure Size	Qty / Case
225180	300µL	Snap / Crimp Finish	11mm	1000
W225187	500µL	Snap / Crimp Finish	11mm	1000
225235	750µL	Snap / Crimp Finish	11mm	1000

12 x 32mm Glass / Plastic Vial with 0.1mL Insert



225190 225200

- Thermoplastic polymer outer shell provides safety from breakage
- Type I borosilicate glass insert for contact with sample
- 100 µL glass insert volume
- Conical interior ensures maximum retrieval of contents without the hassle of removable inserts

Cat. No.	Closure Style	Color	Closure Size	Qty / Case
225190	Snap / Crimp Finish	Clear	11mm	100
225200	Snap / Crimp Finish	Amber	11mm	100

E-Z Vial® with Snap Ring Convenience packs (12 x 32mm Snap Top with 11mm Snap Cap)

Cat. No.	Vial	Cap Color	Septum	Qty / Case	Vial Cat. No.	Cap Cat. No.
W224620-01	Clear	Natural	PTFE / Red Rubber	100	225179	242786
W224620-0103	Clear	Red	PTFE / Red Rubber	100	225179	242786-04
W224620-0104	Clear	Blue	PTFE / Red Rubber	100	225179	242786-01
W224620-0105	Clear	Yellow	PTFE / Red Rubber	100	225179	242786-05
W224620-0107	Clear	Green	PTFE / Red Rubber	100	225179	242786-02
W224620-02	Clear	Natural	PTFE / Silicone	100	225179	242776
W224620-0203	Clear	Red	PTFE / Silicone	100	225179	242776-04
W224620-0204	Clear	Blue	PTFE / Silicone	100	225179	242776-01
W224620-0205	Clear	Yellow	PTFE / Silicone	100	225179	242776-05
W224620-0207	Clear	Green	PTFE / Silicone	100	225179	242776-02
W224620-03	Clear	Natural	PTFE / Silicone / PTFE	100	225179	242772
W224620-0303	Clear	Red	PTFE / Silicone / PTFE	100	225179	242772-04
W224620-0304	Clear	Blue	PTFE / Silicone / PTFE	100	225179	242772-01
W224620-0305	Clear	Yellow	PTFE / Silicone / PTFE	100	225179	242772-05
W224620-0307	Clear	Green	PTFE / Silicone / PTFE	100	225179	242772-02
W224621-01	Clear with Patch	Natural	PTFE / Red Rubber	100	225179-01	242786
W224621-0103	Clear with Patch	Red	PTFE / Red Rubber	100	225179-01	242786-04
W224621-0104	Clear with Patch	Blue	PTFE / Red Rubber	100	225179-01	242786-01
W224621-0105	Clear with Patch	Yellow	PTFE / Red Rubber	100	225179-01	242786-05
W224621-0107	Clear with Patch	Green	PTFE / Red Rubber	100	225179-01	242786-02
W224621-02	Clear with Patch	Natural	PTFE / Silicone	100	225179-01	242776
W224621-0203	Clear with Patch	Red	PTFE / Silicone	100	225179-01	242776-04
W224621-0204	Clear with Patch	Blue	PTFE / Silicone	100	225179-01	242776-01
W224621-0205	Clear with Patch	Yellow	PTFE / Silicone	100	225179-01	242776-05
W224621-0207	Clear with Patch	Green	PTFE / Silicone	100	225179-01	242776-02
W224621-03	Clear with Patch	Natural	PTFE / Silicone / PTFE	100	225179-01	242772
W224621-0303	Clear with Patch	Red	PTFE / Silicone / PTFE	100	225179-01	242772-04
W224621-0304	Clear with Patch	Blue	PTFE / Silicone / PTFE	100	225179-01	242772-01
W224621-0305	Clear with Patch	Yellow	PTFE / Silicone / PTFE	100	225179-01	242772-05
W224621-0307	Clear with Patch	Green	PTFE / Silicone / PTFE	100	225179-01	242772-02
W224622-01	Amber	Natural	PTFE / Red Rubber	100	225179-02	242786
W224622-0103	Amber	Red	PTFE / Red Rubber	100	225179-02	242786-04
W224622-0104	Amber	Blue	PTFE / Red Rubber	100	225179-02	242786-01
W224622-0105	Amber	Yellow	PTFE / Red Rubber	100	225179-02	242786-05
W224622-0107	Amber	Green	PTFE / Red Rubber	100	225179-02	242786-02
W224622-02	Amber	Natural	PTFE / Silicone	100	225179-02	242776
W224622-0203	Amber	Red	PTFE / Silicone	100	225179-02	242776-04
W224622-0204	Amber	Blue	PTFE / Silicone	100	225179-02	242776-01
W224622-0205	Amber	Yellow	PTFE / Silicone	100	225179-02	242776-05
W224622-0207	Amber	Green	PTFE / Silicone	100	225179-02	242776-02
W224622-03	Amber	Natural	PTFE / Silicone / PTFE	100	225179-02	242772
W224622-0303	Amber	Red	PTFE / Silicone / PTFE	100	225179-02	242772-04
W224622-0304	Amber	Blue	PTFE / Silicone / PTFE	100	225179-02	242772-01
W224622-0305	Amber	Yellow	PTFE / Silicone / PTFE	100	225179-02	242772-05
W224622-0307	Amber	Green	PTFE / Silicone / PTFE	100	225179-02	242772-02
W224623-01	Amber with Patch	Natural	PTFE / Red Rubber	100	225179-03	242786
W224623-0103	Amber with Patch	Red	PTFE / Red Rubber	100	225179-03	242786-04
W224623-0104	Amber with Patch	Blue	PTFE / Red Rubber	100	225179-03	242786-01
W224623-0105	Amber with Patch	Yellow	PTFE / Red Rubber	100	225179-03	242786-05
W224623-0107	Amber with Patch	Green	PTFE / Red Rubber	100	225179-03	242786-02
W224623-02	Amber with Patch	Natural	PTFE / Silicone	100	225179-03	242776
W224623-0203	Amber with Patch	Red	PTFE / Silicone	100	225179-03	242776-04
W224623-0204	Amber with Patch	Blue	PTFE / Silicone	100	225179-03	242776-01
W224623-0205	Amber with Patch	Yellow	PTFE / Silicone	100	225179-03	242776-05
W224623-0207	Amber with Patch	Green	PTFE / Silicone	100	225179-03	242776-02
W224623-03	Amber with Patch	Natural	PTFE / Silicone / PTFE	100	225179-03	242772
W224623-0303	Amber with Patch	Red	PTFE / Silicone / PTFE	100	225179-03	242772-04
W224623-0304	Amber with Patch	Blue	PTFE / Silicone / PTFE	100	225179-03	242772-01
W224623-0305	Amber with Patch	Yellow	PTFE / Silicone / PTFE	100	225179-03	242772-05
W224623-0307	Amber with Patch	Green	PTFE / Silicone / PTFE	100	225179-03	242772-02

DROPPER BOTTLES, TIPS & CLOSURES



WHEATON® dropper bottles are made of natural or white LDPE (Low-Density Polyethylene). White LDPE bottles help protect UV light-sensitive samples.

WHEATON extended controlled dropper tips are made of LDPE (Low-Density Polyethylene). The extended controlled dropper tip dispenses one drop at a time, with an average drop size of $44\mu\text{L} \pm 6\mu\text{L}$.

WHEATON dropper tip caps are available in radiation-grade polypropylene in various colors.

Product Highlights	
Extended controlled dropping tips dispense reliable, repeatable uniform drop sizes	Tips made of Linear Low Density Polyethylene (LDPE) and closures made of radiation-grade polypropylene
Excellent chemical resistance making it ideal for most biotech, diagnostic, and pharmaceutical applications	Tips and closures available in 11 colors
Friction and snap fit tips provide a secure fit to the bottle	Bottles made of Low-Density Polyethylene (LDPE)
Available in black and white for light-sensitive products	Products are double bagged and twist-tied to reduce particulates
Manufactured to rigid ISO and quality standards	Methods of sterilization: EtO and gamma
Excellent alternative to pipetting	Custom configurations are available upon request
Bottles available in sizes ranging from 1 to 125mL	Lot controlled

Dropper Bottle, LDPE



Cat. No.	Size (mL)	Color	Closure Size (mm)	Tip Size (mm)	Dia x Height (mm)*	Qty / Case
W009899A	1	White	8-425	8	12 x 25	3,000
W009891A	1	Natural	8-425	8	12 x 25	3,000
W001500	3	White	8-425	8	13 x 39	3,000
W001550	3	Natural	8-425	8	13 x 39	3,000
W009879	3	Black	8-425	8	13 x 39	3,000
W009912	6	White	13-425	13	17 x 42	2,400
W001814	6	Natural	13-425	13	17 x 42	2,600
W013881**	6	White	13-425	13	17 x 42	2,600
W001520	7	White	15-415	15	19 x 51	1,800
W001551	7	Natural	15-415	15	19 x 51	1,800
W009791	7	Black	15-415	15	19 x 51	1,800
W001813	10	White	15-415	15	25 x 45	1,400
W001810	10	Natural	15-415	15	25 x 45	1,400
W010976	10	Black	15-415	15	25 x 45	1,400
W001857**	15	White	15-415	15	25 x 66	800
W001552**	15	Natural	15-415	15	25 x 66	800
W001843	30	White	20-410	20	31 x 70	1,500
W001553	30	Natural	20-410	20	31 x 70	1,500
W001856	60	White	20-410	20	39 x 85	800
W001663A	60	Natural	20-410	20	39 x 85	800
W017890	125	White	20-410	20	46 x 108	400
W017889	125	Natural	20-410	20	46 x 108	400

* Dimensions without closure

** Tamper proofing bead for use with shrink bands

Controlled Dropper Tip



Cat. No.	Size (mm)	Color	Drop Size	Use Closure	Qty / Case
Flat					
W001529	13	Natural	62.5µL ±5	13-425	10,000
W008580	13	White	62.5µL ±5	13-425	10,000
W008761A	15	Natural	62.5µL ±5	15-415	8,500
W011431A	15	White	62.5µL ±5	15-415	8,500
W009323A	20	Natural	62.5µL ±5	20-410	4,500
Round					
W001695	8	Natural	18µL ±5	W001693C	20,000
W009445	8	Natural	25µL ±5	W001693C	20,000
W011025	8	White	18µL ±5	W001693C	20,000
W013441	8	White	25µL ±5	W001693C	20,000

Dropper Bottle Tips



8mm



13mm



15mm



20mm

8mm Tip for use with 8-425 Closure

Cat. No.	Color	Drop Size	Qty / Case
W001761A	Natural	44µL ±6µL	20,000
W001558C	Pink	44µL ±6µL	20,000
W001498A	Red	44µL ±6µL	20,000
W001557A	Orange	44µL ±6µL	20,000
W001496A	Blue	44µL ±6µL	20,000
W001556A	Gray	44µL ±6µL	20,000
W001497A	Green	44µL ±6µL	20,000
W001559B	Purple	44µL ±6µL	20,000
W001499B	Yellow	44µL ±6µL	20,000
W001501A	White	44µL ±6µL	20,000

13mm Tip for use with 13-425 Closure

Cat. No.	Color	Drop Size	Qty / Case
W001891A	Natural	44µL ±6µL	10,000
W001787C	Pink	44µL ±6µL	10,000
W001790A	Red	44µL ±6µL	10,000
W001783A	Orange	44µL ±6µL	10,000
W001770A	Blue	44µL ±6µL	10,000
W001780A	Gray	44µL ±6µL	10,000
W001781A	Green	44µL ±6µL	10,000
W001788B	Purple	44µL ±6µL	10,000
W001793B	Yellow	44µL ±6µL	10,000
W001605A	Black	44µL ±6µL	10,000
W001791A	White	44µL ±6µL	10,000

15mm Tip for use with 15-415 Closure

Cat. No.	Color	Drop Size	Qty / Case
W001762	Natural	44µL ±6µL	9,000
W001800B	Pink	44µL ±6µL	9,000
W001873	Red	44µL ±6µL	9,000
W001799	Orange	44µL ±6µL	9,000
W001851	Blue	44µL ±6µL	9,000
W001795	Gray	44µL ±6µL	9,000
W001852	Green	44µL ±6µL	9,000
W001802A	Purple	44µL ±6µL	9,000
W001850A	Yellow	44µL ±6µL	9,000
W009790	Black	44µL ±6µL	9,000
W001882	White	44µL ±6µL	9,000

20mm Tip for use with 20-410 Closure

Cat. No.	Color	Drop Size	Qty / Case
W001760A	Natural	44µL ±6µL	5,000
W001815C	Pink	44µL ±6µL	5,000
W001817A	Red	44µL ±6µL	5,000
W001807A	Orange	44µL ±6µL	5,000
W001804A	Blue	44µL ±6µL	5,000
W001806A	Green	44µL ±6µL	5,000
W001816A	Purple	44µL ±6µL	5,000
W001819A	Yellow	44µL ±6µL	5,000
W001818A	White	44µL ±6µL	5,000

Dropper Bottle Closures



8mm



13mm



15mm



20mm

8-425 Closure for use with 8mm Tip

Cat. No.	Color	Qty / Case
W009510RA	Natural	21,000
W001644RA	Pink	21,000
W001632RA	Red	21,000
W001645RA	Orange	21,000
W001633RA	Blue	21,000
W001646RA	Gray	21,000
W001634RA	Green	21,000
W001647RB	Purple	21,000
W001635RB	Yellow	21,000
W001596RA	Black	21,000
W001765RA	White	21,000

13-425 Closure for use with 13mm Tip

Cat. No.	Color	Qty / Case
W009342RA	Natural	13,000
W001560RA	Pink	13,000
W001561RA	Red	13,000
W001562RA	Orange	13,000
W001563RA	Blue	13,000
W001564RA	Gray	13,000
W001565RA	Green	13,000
W001566RA	Purple	13,000
W001567RB	Yellow	13,000
W012876RA	Black	13,000
W009245RA	White	13,000

15-415 Closure for use with 15mm Tip

Cat. No.	Color	Qty / Case
W001839RB	Natural	7,000
W001649RB	Pink	7,000
W001636RB	Red	7,000
W001650RB	Orange	7,000
W001637RB	Blue	7,000
W001651RB	Gray	7,000
W001638RB	Green	7,000
W001652RC	Purple	7,000
W001639RC	Yellow	7,000
W008512RB	Black	7,000
W001766RB	White	7,000

20-410 Closure for use with 20mm Tip

Cat. No.	Color	Qty / Case
W007995RA	Natural	4,500
W001654RA	Pink	4,500
W001640RA	Red	4,500
W001655RA	Orange	4,500
W001641RA	Blue	4,500
W001656RA	Gray	4,500
W001642RA	Green	4,500
W001657RB	Purple	4,500
W001643RB	Yellow	4,500
W011836RA	Black	4,500
W008888RA	White	4,500

WHEATON® COMPLETEPAK™

The WHEATON® **COMPLETEPAK** product line is a range of crimp top vials, rubber stoppers, and seals that are ready-to-use and are off-the-shelf, which can be customized for any application. This reduces our customer's supply chain due to our one-source solution capability. Each kit comes with specific United States Pharmacopeia (USP) certificates showing that the product meets or exceeds critical USP standards that are enforced by the Federal Drug Administration (FDA). This solution allows our customers to focus on their core competencies: manufacturing, compounding, and developing drug products.

Target Applications

- Compounding pharmaceuticals
- Aseptic filling of injectable drug products
- Drug discovery
- Drug research
- Freeze drying / lyophilized drug products
- Large and small molecule drug packaging

Key Benefits

- Sterilized, off-the-shelf, ready-to-use (RtU) products
- Variety of Kitted and stand-alone sterile components — a solution for any application
- Kitted solutions feature equal amounts of RtU components for reduced scrap rates
- Complete manufacturing & certificate of analysis traceability
- USP <788> Particulate Matter in Injections, USP <85> The Bacterial Endotoxins Test and USP <71> The Sterility Test
- CompletePAK Amber for light-sensitive content packaging
- CompletePAK ModPAK Bulk configurations
- 18 month shelf life from date of processing
- Container Closure Integrity (CCI) certification available upon request

Materials

- Vials are designed for parenteral applications and manufactured from low extractable borosilicate glass
- All stoppers are manufactured from an ultrapure bromobutyl latex-free formulation with extremely high chemical purity and low gas permeability
- Omniflex stoppers offer low levels of residual binding to maximize extraction of active pharmaceutical ingredients
- Omniflex stopper elasticity delivers a more effective barrier to optimize container closure integrity and content protection
- Igloo lyophilized stoppers are suited for biologics and content with sensitivities to silicon



ENHANCING THE EFFICIENCY OF DRUG DISCOVERY AND DRUG COMPOUNDING



TOP REASONS WHY YOU SHOULD CHOOSE COMPLETEPAK FOR YOUR APPLICATION:

1. Products supplied ready-to-use to improve workflow
2. Single source options reduce lead times & simplify administrative effort
3. Focuses your efforts on critical core competencies
4. Eliminates capital investments in sterile processing equipment
5. Frees up valuable clean room space
6. Validated processes & Certificate of Analysis traceability assures quality production outcomes
7. Saves valuable time and money while maintaining a high-quality product and streamlining process

WHEATON® COMPLETEPAK™ Kits

Clear Kit Cat. No.	Amber Kit Cat. No.	Qty/ Case	Description (pieces/kit) <i>All pieces packed sterilized</i>	ModPAK Cat. No. (Clear)	ModPAK Cat. No. (Amber)	Cases / ModPAK
W991000-CP	W991000-CPA	1	2mL Vial (278), 13mm Ultra Pure Serum Stopper (285), Blue Seal (285)	W991000-CPMP	W991000A-CPMP	6
W991001-CP	W991001-CPA	1	2mL Vial (278), 13mm Omni Flex Serum Stopper (285), Blue Seal (285)	W991001-CPMP	W991001A-CPMP	6
W991002-CP	W991002-CPA	1	2mL Vial (278), 13mm OmniFlex Igloo Lyo Stopper (285), Blue Seal (285)	W991002-CPMP	W991002A-CPMP	6
W991003-CP	W991003-CPA	1	2mL Vial (278), 13mm Ultra Pure Serum Stopper (285), Red Seal (285)	W991003-CPMP	W991003A-CPMP	6
W991004-CP	W991004-CPA	1	2mL Vial (278), 13mm Omni Flex Serum Stopper (285), Red Seal (285)	W991004-CPMP	W991004A-CPMP	6
W991005-CP	W991005-CPA	1	2mL Vial (278), 13mm OmniFlex Igloo Lyo Stopper (285), Red Seal (285)	W991005-CPMP	W991005A-CPMP	6
W991006-CP	W991006-CPA	1	5mL Vial (120), 20mm Ultra Pure Serum Stopper (125), Blue Seal (125)	W991006-CPMP	W991006A-CPMP	6
W991007-CP	W991007-CPA	1	5mL Vial (120), 20mm OmniFlex Serum Stopper (125), Blue Seal (125)	W991007-CPMP	W991007A-CPMP	6
W991008-CP	W991008-CPA	1	5mL Vial (120), 20mm OmniFlex Igloo Lyo Stopper (125), Blue Seal (125)	W991008-CPMP	W991008A-CPMP	6
W991009-CP	W991009-CPA	1	5mL Vial (120), 20mm Ultra Pure Serum Stopper (125), Red Seal (125)	W991009-CPMP	W991009A-CPMP	6
W991010-CP	W991010-CPA	1	5mL Vial (120), 20mm OmniFlex Serum Stopper (125), Red Seal (125)	W991010-CPMP	W991010A-CPMP	6
W991011-CP	W991011-CPA	1	5mL Vial (120), 20mm OmniFlex Igloo Lyo Stopper (125), Red Seal (125)	W991011-CPMP	W991011A-CPMP	6
W991012-CP	W991012-CPA	1	10mL Vial (104), 20mm Ultra Pure Serum Stopper (125), Blue Seal (125)	W991012-CPMP	W991012A-CPMP	6
W991013-CP	W991013-CPA	1	10mL Vial (104), 20mm OmniFlex Serum Stopper (125), Blue Seal (125)	W991013-CPMP	W991013A-CPMP	6
W991014-CP	W991014-CPA	1	10mL Vial (104), 20mm OmniFlex Igloo Lyo Stopper (125), Blue Seal (125)	W991014-CPMP	W991014A-CPMP	6
W991015-CP	W991015-CPA	1	10mL Vial (104), 20mm Ultra Pure Serum Stopper (125), Red Seal (125)	W991015-CPMP	W991015A-CPMP	6
W991016-CP	W991016-CPA	1	10mL Vial (104), 20mm OmniFlex Serum Stopper (125), Red Seal (125)	W991016-CPMP	W991016A-CPMP	6
W991017-CP	W991017-CPA	1	10mL Vial (104), 20mm OmniFlex Igloo Lyo Stopper (125), Red Seal (125)	W991017-CPMP	W991017A-CPMP	6

WHEATON® COMPLETEPAK™ Sterile Components*

Cat. No.	Description	Qty / Case
Clear Vials		
W987000-S	2mL Clear Sterile Serum Vial	278
W987001-S	5mL Clear Sterile Serum Vial	120
W987002-S	10mL Clear Sterile Serum Vial	104
Amber Vials		
W987000A-S	2mL Amber Sterile Serum Vial	278
W987001A-S	5mL Amber Sterile Serum Vial	120
W987002A-S	10mL Amber Sterile Serum Vial	104

*Sterile components are available in quantities of 2 or less. For quantities of 3 or more, contact us directly.

Cat. No.	Description	Qty / Case
Stoppers		
W988003-S	13mm OmniFlex Sterile Serum Stopper	285
W988004-S	13mm Ultra Pure Sterile Serum Stopper	285
W988005-S	13mm OmniFlex Sterile Igloo Lyo Stopper	285
W988006-S	20mm OmniFlex Sterile Serum Stopper	125
W988007-S	20mm Ultra Pure Sterile Serum Stopper	125
W988008-S	20mm OmniFlex Sterile Igloo Lyo Stopper	125
Seals		
W988009-S	13mm Sterile Red Flip Seal	285
W988010-S	13mm Sterile Blue Flip Seal	285
W988011-S	20mm Sterile Red Flip Seal	125
W988012-S	20mm Sterile Blue Flip Seal	125

****Contact your DWK Representative for bulk pricing or to customize a CompletePAK configuration for your unique use-case****

MEDIA & REAGENT BOTTLES



Our media and lab glass bottles are ideally suited for mixing, extended storage, transporting, and drip-free dispensing of liquid media, buffer solutions, culture media, non-hazardous chemicals or volatile organic substances, and solvents. Media bottle solutions are available in glass and plastic. Specifically, we offer type I glass in non-drip amber or clear — perfect for higher temperature applications. Plastic products are provided in HDPE/PP, amber or natural, wide- or narrow-mouth, and are double-bagged and lot-controlled in sizes ranging from 4ml to 1000ml. Plastic solutions — available with colored linerless closures — are the best choice for impact-resistant, low-temperature applications. Media bottles are also available in square shapes, graduated styles, and with phenolic or PBT screw caps with ETFE pour lips for use with high-temperature applications.

Glass reagent bottles are offered in borosilicate wide-and narrow-mouth in stopper or screw thread finishes suitable for autoclave applications. Glass reagent screw thread styles offer a no-drip pour. They include a matching polypropylene cap with a PTFE liner. Ideal for sample storage and shipping of reagents, buffers, conjugates, substrates, standards, and biologics.

Product Highlights	
Plastic Bottles	Glass Bottles
• Ideal for packaging liquid media, buffer solutions, and sera	• USP Type I clear borosilicate glass which provides the best chemical resistance
• No-drip pour lip for aseptic applications	• Unique lip design to facilitate no-drip pouring
• 20% headspace: allows for supplementation / additives and freezing	• Black phenolic screw closures are packaged and sold separately
• Made of sterile Polyethylene Terephthalate (PET) with glass-like clarity	• 1L bottle is designed with hand grips for easy handling
• Molded-in graduations	• Methods of sterilization: autoclave, dry heat, and EtO
• Lightweight	• Custom configurations available upon request
• Packed in shrink-wrapped trays	• Lot controlled
• Closure attached	• Custom configurations available upon request

Plastic



Cat. No.	Size (mL)	Closure Size	Dia x H (mm)*	Qty / Tray	Qty / Case
W083153D	125	33-430	53 x 99	24	96
W013850A	1000	38-430	91 x 220	12	24

* Dimensions with closure attached

Reagent Bottle, Screw Cap

- Manufactured from USP Type I borosilicate glass
- Features no-drip pour lip
- Pre-attached polypropylene screw cap with PTFE liner
- Large writing patch
- Autoclavable



Cat. No.	Size (mL)	Dia. x H (mm)	Cap Size	Qty / Case
220163	125	55 x 120	33-430	6
220223	250	67 x 150	33-430	6
220283	500	88 x 190	33-430	6

Glass



Cat. No.	Capacity (mL)	Dia x H (mm)	Closure Size	Qty / Case
Clear				
W008959A	125	55 x 119	33-430	96
W008637	250	67 x 148	33-430	48
W008957	500	88 x 188	33-430	24
W017147	1000	103 x 231	38-430	12
Amber				
W013197	125	55 x 119	33-430	48

Black Phenolic Closures



Cat. No.	Closure Size (mm)	Closure Color	Qty / Case
Polyethylene (LDPE Liner)			
W000266	33-430	Black	1,300
W000290	38-430	Black	800
Rubber Liner			
W000267A	33-430	Black	1,150
W000291A	38-430	Black	840
PTFE Faced Rubber Liner			
W000269A	33-430	Black	1,150
W000293A	38-430	Black	840
I-Loc™ Closure, Combination Screw Closure with Butyl Stopper			
240683	33-430	Black	1,000

DURAN® PURE

THE API BOTTLE SYSTEM

APPLICATION AREAS

- GMP manufacturing of pharmaceutical drugs and biotech products
- Storage and transport of APIs, bulk drug intermediates, excipients and media

RESEARCH &
DEVELOPMENT

DURAN®
LABORATORY
BOTTLE SYSTEM

PHARMACEUTICAL
PRODUCTION

DURAN® PURE

FILL &
FINISH



Protective cover

Prevents contamination
during storage and transport



MEETS PHARMACEUTICAL REQUIREMENTS

BATCH CERTIFICATE

DURAN PURE

Production and inspection
The articles listed under "Article number" are hereby confirmed to have been produced using a quality system conforming to ISO 9001:2015. They comply with the quality requirements specified in the specification. The properties of DURAN PURE glassware comply with standard EN ISO 15000:2015 (Normative annex 1, 2, 3). The dimensions correspond to the standard ISO 4776-1. Duran's delivery and production facilities are subject to ISO 9001:2015 quality inspections corresponding to the standard ISO 22859-1.

DURAN PURE - Glass Type I
Composition:
15% SiO₂
1% Al₂O₃
2% Na₂O
2% K₂O

Chemical and physical properties
Coefficient of expansion: $3.1 \times 10^{-6} \text{ K}^{-1}$
Acid resistance: Class 1 (EN ISO 1173)
Alkali resistance: Class 1 (EN ISO 1173)
Abrasion resistance: Class 1 (EN ISO 1173)
Bore diameter conformity: Class 1 (EN ISO 1173)
Bore diameter conformity: Class 1 (EN ISO 1173)

All confirmations and information in this certificate apply solely to goods originating from DURAN. For further production details these details are not binding.

Issued on: 11/01/2023
Approved on: 11/01/2023
Issued by: [Signature]
Approved by: [Signature]

Dr. A. Fritze, Quality Manager
[Signature]

Dr. A. Fritze, VP Quality
[Signature]

This document is issued electronically and is not valid if printed.

DURAN Life Sciences GmbH • Hohenbergstrasse 10 • 40535 Düsseldorf, Germany
www.duran-life.com

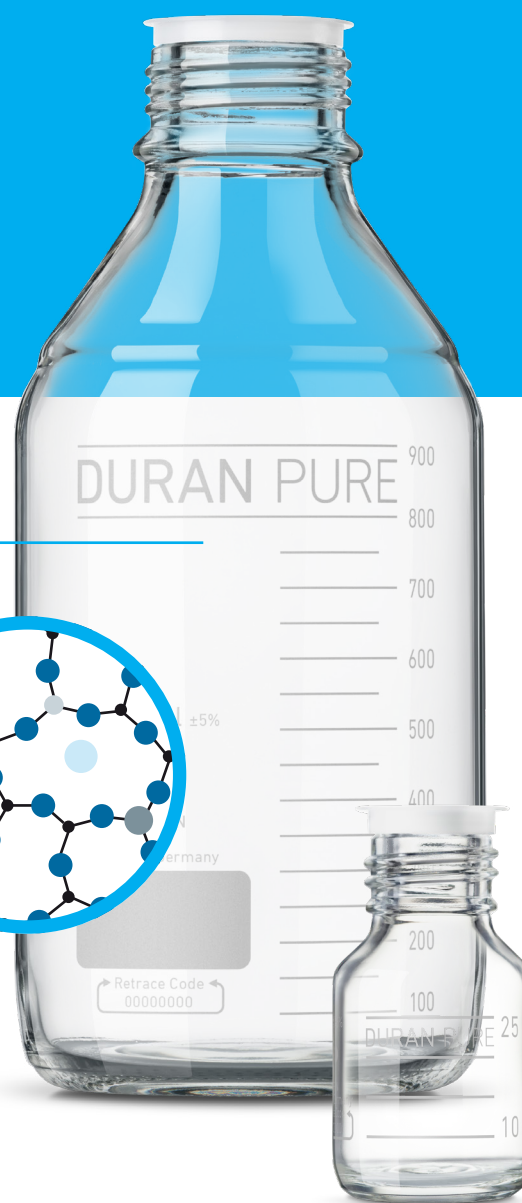
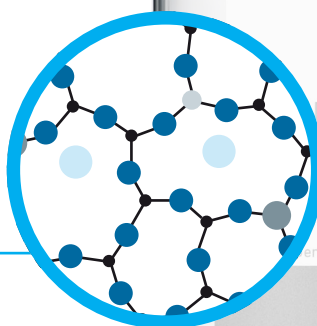
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Page 1 of 2

- Single batch delivery
- Certificate of Analysis
- 100% traceability
- Change control
- Drug Master File

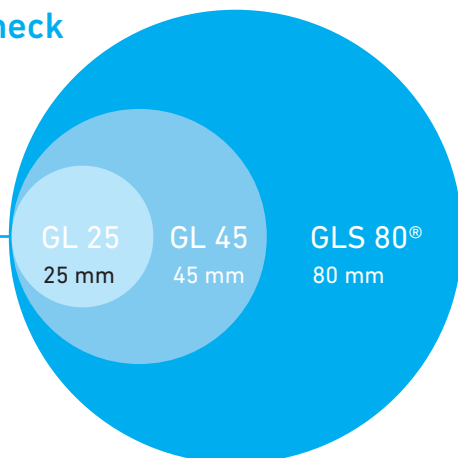
Broad size range from 25 ml - 20 l

Clear glass and amber colored bottles are
available with different neck sizes

EP/USP Type I
borosilicate glass



Bottle neck sizes



DURAN® PURE closures

- Made from chemically and thermally resistant polymers
- Produced in clean rooms
- Single batch delivery
- Certificate of Analysis
- 100% traceability
- Change control
- Extractables report
- Drug Master File



DURAN® PURE
Premium Screw Caps
GL 25 and GL 45
made from PFA with
PTFE coated silicone seal



DURAN® PURE
Premium Lip Seal Cap
GL 45
made from PFA



DURAN® PURE
GLS 80® Screw Cap
made from PSU with
PTFE coated silicone seal



DWK Life Sciences amber coloring technology

- Application of amber color on the outside of EP / USP Type I borosilicate clear glass bottles
- Thermal fixation process at the exterior glass surface – homogeneous color distribution
- Washing with deionized water and assembly of protective cover

LIGHT TRANSMISSION RATE < 10%

- Wavelength range 290 - 450 nm
- In compliance with EP and USP



DURAN® PURE bottles

Volume [ml]	DIN thread GL	Bottles per box [pcs.]	Bottles per pallet [pcs.]	Article number clear glass	Article number amber colored
25	25	10	940	81 801 14 01	81 806 14 06
100	45	10	540	81 801 24 06	81 806 24 02
250	45	10	280	81 801 36 08	81 806 36 04
500	45	10	360	81 801 44 07	81 806 44 03
1 000	45	10	210	81 801 54 03	81 806 54 08
2 000	45	10	120	81 801 63 05	81 806 63 01
5 000	45	1	48	81 801 73 01	81 806 73 06
10 000	45	1	30	81 801 86 06	81 806 86 02
20 000	45	1	12	81 801 91 05	81 806 91 01

DURAN® PURE closures

Description	DIN thread GL	Products per PE bag [pcs.]	Article number
DURAN® PURE Premium Screw Cap	25	5	89 108 13 06
DURAN® PURE Premium Screw Cap	45	5	89 108 86 79
DURAN® PURE Premium Lip Seal Cap	45	5	89 886 28 02
DURAN® PURE Premium Pouring Ring	45	5	89 108 86 78
DURAN® PURE Silicone Seal, PTFE coated	25	10	29 248 14 56
DURAN® PURE Silicone Seal, PTFE coated	45	10	29 248 29 58



DURAN® PURE GLS 80® bottles

Volume [ml]	Bottles per box [pcs.]	Bottles per pallet [pcs.]	Article number clear glass	Article number amber colored
500	10	280	81 860 44 03	81 866 44 09
1 000	10	210	81 860 54 08	81 866 54 05
2 000	10	120	81 860 63 01	81 866 63 07
5 000	1	48	81 860 73 06	81 866 73 03
10 000	1	30	81 860 86 02	81 866 86 08
20 000	1	12	81 860 91 01	81 866 91 07

DURAN® PURE GLS 80® closure

Description	Products per PE bag [pcs.]	Article number
DURAN® PURE GLS 80® Screw Cap	1	89 116 91 09
DURAN® PURE Silicone Seal, PTFE coated	10	29 248 91 02

TUBING VIALS



Product Highlights	
• USP Type I clear and amber borosilicate glass	• Shorty Vials® feature a low profile for greater stability
• Clear is 33 Expansion	• Highest resistance to thermal shock
• Amber meets USP for UV light transmission	• Screw thread finish for resealability
• Uniform sidewall provides excellent clarity and strength while reducing overall weight	• Packed in shrink-wrapped modules to reduce particulate
• Superior barrier properties with low extractables and pH stability	• Methods of sterilization: autoclave, dry heat, and EtO
• Radiused corners and shoulders	• Custom configurations available upon request

Storage Vial



Cat. No.	Size (mL)	Closure Size (mm)	Dia x H (mm)	Qty / Case
Clear				
W015402	1.8	8-425	12 x 32	1,000
W015403	2	8-425	12 x 35	1,000
W015404	4	13-425	15 x 45	1,000
W015405	8	15-425	17 x 60	1,000
W015406	12	15-425	19 x 65	1,000
W015407	16	18-400	21 x 70	1,000
W015408	20	24-400	28 x 57	1,000
W015409	24	20-400	23 x 85	1,000
W015410	25	24-400	28 x 70	1,200
W015411	40	24-400	28 x 95	1,000
W015412	60	24-400	30 x 125	1,000
Amber				
W015413	1.8	8-425	12 x 32	1,000
W015414	2	8-425	12 x 35	1,000
W015415	4	13-425	15 x 45	1,000
W015416	8	15-425	17 x 60	1,000
W015417	20	24-400	28 x 57	1,000
W015418	40	24-400	28 x 95	1,000

Shorty Vial®



Cat. No.	Size (mL)	Closure Size (mm)	Dia x H (mm)	Qty / Case
Clear				
W010149	2	13-425	15 x 28	3,040
W008472	4	15-425	17 x 38	2,420
W011710	6	15-425	19 x 40	3,045
Amber				
W011322	2	13-425	15 x 28	3,040
W009996	4	15-425	17 x 38	2,420

Black Phenolic Vial Closures



Cat. No.	Closure Size (mm)	Closure Color	Qty / Case
14B White Rubber Liner			
W015419	8-425	Black	1,000
W015420	13-425	Black	1,000
W015421	15-425	Black	1,000
W015422	18-400	Black	1,000
W015423	20-400	Black	1,000
W015424	24-400	Black	1,000
PTFE Faced Rubber Liner			
W015425	8-425	Black	1,000
W015320	13-425	Black	1,000
W015321	15-425	Black	1,000
W015428	18-400	Black	1,000
W015429	20-400	Black	1,000
W015430	24-400	Black	1,000

THREADED CULTURE TUBES

Screw Thread Culture Tubes

- Ideal for packaging of buffers and other diagnostic kit content
- USP Type I 51 and ASTM E438, Type I, Class B: Chemically stable, biologically inert, and resistant to sodium leaching
- ASTM Specification E890: Conformal and Cosmetic Defect, Bottom Uniformity, & Length Consistency
- Caps sold separately



Cat. No.	OD x Length (mm)	GPI Finish	Capacity (mL)	Qty / Case
Round Bottom				
73770-13100	13 x 100	13-415	8	1,000
73770-1690	16 x 90	15-415	10	1,000
73770-16100	16 x 100	15-415	12	1,000
73770-16125	16 x 125	15-415	16	1,000
73770-16150	16 x 150	15-415	20	1,000
73770-20125	20 x 125	18-415	25	500
73770-20150	20 x 150	18-415	30	500
Flat Bottom				
73760-16125	16 x 125	15-415	16	1,000
90H13100F	13 x 100	13-415	8	1000
90K16100F	16 x 100	15-415	12	1000
90K16125F	16 x 125	15-415	16	1000
90P20113F	20 x 113	18-415	20	500
90P20125F	20 x 125	18-415	25	500
90P20150F	20 x 150	18-415	30	500

Screw Thread Culture Tube Caps

- Available in black phenolic in a variety of sizes and liner selection
- Available in white or natural polypropylene in a variety of sizes



Cat. No.	Description	Qty / Case
73800-13415	13-415 Black Phenolic Cap, Cemented White Rubber Liner	1,000
73800-15415	15-415 Black Phenolic Cap, Cemented White Rubber Liner	1,000
73800-18415	18-415 Black Phenolic Cap, Cemented White Rubber Liner	1,000
73802-13415	13-415 Black Phenolic Cap, Cemented PTFE Faced, White Rubber Liner	500
73802-15415	15-415 Black Phenolic Cap, Cemented PTFE Faced, White Rubber Liner	500
73805-15415	15-415 White Polypropylene, Linerless, Economy, for Screw Thread Culture Tube	1,000
73805B-13415	13-415 Natural Polypropylene, Linerless	1,000
73805B-15415	15-415 Natural Polypropylene, Linerless	1,000
73805B-18415	18-415 Natural Polypropylene, Linerless	500

PREMIUM SERVICES

Allowing our customers to focus on their core competencies



Critical Cleaning

We use USP or WFI purified water, HEPA filtering, and package items in certified class 100/10 cleanrooms to remove trace organics, trace inorganics, volatile organics and organic carbon residues.

DWK Life Sciences can deliver glass containers and accessories with endotoxin levels of less than 0.06 EU/mL with full documentation and certification, and we can provide a special Type I glass vial with a special additive that will prevent the glass from turning brown when gamma radiated.

- Low particulate cleaning
- Depyrogenation, which reduces endotoxin content
- Chemical cleaning for trace analysis
- Sterilization (E-beam and gamma irradiation, autoclaving, dry heat)
- Water for Injection (WFI) rinse (or cleaning)
- USP Purified Water Rinse
- Total Organic Carbon (TOC) Process
- Class 1000: Container and closure without washing treatment
- Class 2000: Container and closure cleaned and assembled
- Class 3000: Container and closure cleaned, assembled, and quality assurance analyzed

Depyrogenation

- Glass containers are depyrogenated by high heat exposure, followed by steam sterilization.
- Stoppers / seals are depyrogenated by USP / WFI wash, followed by steam sterilization.

Surface Deactivation Treatment

Surface treatment refers to a process by which the entire surface of a container is deactivated via silanization or siliconization. The coating provides a protective barrier between the contents and the glass, eliminating active sites on the glass that could potentially react with its contents. We ensure containers are adequately prepared for your procedures by using vapor phase deposition for silanization or siliconization coating to lubricate and protect against alkalization. Siliconization is ideal for serum vials and containers that store pH-sensitive samples.

Silanized vials are used to reduce the adsorption of polar compounds onto the surface of the glass container. It also helps to avoid alkalization of contents, which may occur as carbonates leach from the glass with normal "weathering". Autosampler vials treated with silanization improve sample recovery. DWK Life Sciences frequently silanizes vials and vial inserts for customers using analytical techniques.

Silanization and Siliconization

Provides a protective barrier between the contents and the glass, eliminating active sites on the glass that could potentially react with its contents.

Serum Vials and pH Sensitive Storage

Silanization lubricates the vial and protects against alkalization.

Sterilization of Glass Containers

Although most types of glass are sterilizable by steam or dry heat, certain techniques are recommended for specific types of glass. Most Type I borosilicate glass is suitable when proper procedures are followed for sterilization and depyrogenation. Type III is not recommended for repeated steam sterilization, although this may be appropriate on a single-use basis. Recommended autoclave cycles are 121°C @ 15 psi for 20 minutes. Closures should be left loose on the containers. Proper care must be given when venting back into the atmosphere, or there may be damage to the containers.

Dry heat sterilization can be achieved at a temperature of 160°C for 2 to 3 hours, but glass containers are capable of withstanding sterilization temperatures up to 500°C without noticeable degradation of the glass. Repeated dry heat sterilization of containers containing a fair amount of moisture may be susceptible to glass flaking. Inversion of the container and good ventilation would prevent this from occurring. Inspect glass containers for chips, cracks, and scratches before each use and discard them if the damage is evident, as breakage may occur during sterilization. Glass containers may also be sterilized using gas or chemicals. Ethylene oxide (EtO), formaldehyde, or peroxide gas is generally used when heat and pressure cannot be used due to material limitations. Chemical disinfectants commonly used are quaternary ammonium compounds, iodophors, formalin, benzalkonium chloride, and ethanol.

Glass containers may also be sterilized using irradiation. However, the process changes the color of the glass, which may not be acceptable for most applications. There is glass tubing available that will not change color when irradiated. This would be available for those interested in large quantity orders of tubing vials only.

Radiation

Ware is exposed to ionizing radiation that knocks electrons off atoms it contacts. Ionizing radiation is lethal to microorganisms because of its destructive effect upon the contents of living cells. There are two common sources of ionizing radiation used for sterilization:

- Cobalt 60 (gamma radiation) OR
- Electron beam or E-beam (high energy electrons)

The amount of radiation from either Cobalt 60 or electron beam is measured in MegaRads (MRads) or KiloGrays (KGy). One MegaRad equals ten KiloGrays. Because gamma sterilization and E-beam both use radiation, packaging materials react similarly in both systems

Important Note About Polypropylene Gamma Radiation Sterilization

Normal PP grades yellow noticeably and exhibit long term embrittlement when sterilized via gamma radiation techniques. Special radiation-resistant PP grades, having special stabilizers, are available for radiation sterilization. Also, if ware is to be colored, then the concentrate carrier should be a radiation-resistant grade of PP. PP copolymers are more radiation-resistant than PP homopolymers. Tests should always be run on plastic ware to determine suitability for a given sterilization method.

Important Note About Polypropylene E-Beam Sterilization

Normal PP grades yellow noticeably and exhibit long term embrittlement when sterilized via E-Beam. Special PP grades, having special stabilizers, are available for E-beam sterilization. Also, if ware is to be colored, then the concentrate carrier should be a radiation resistant grade of PP. PP copolymers are more radiation-resistant than PP homopolymers. Tests should always be run on plastic ware to determine suitability for a given sterilization method.

DISCLAIMER: The data and information contained herein are limited to illustrative examples that are based on limited testing procedures. However, due to variable conditions of use and methods processing, NO GUARANTEES OR WARRANTIES ARE EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. DWK Life Sciences does not recommend any use that infringes patents. This data and information, and the products and processes described, are subject to change at any time without notice. Please contact your DWK Life Sciences representative with your specific packaging needs.

Lead Contact Information:

Company: _____ Contact: _____
Address: _____ Telephone: _____
Fax: _____ Email: _____

Container Information:

☐ DWK Life Sciences Provides Materials ☐ Customer Sending Materials for Service Only

Please Provide Container or Component Information – One (1) Item per Page

Manf. & Identification or WHEATON Part # (if known)	Description	Volume (mL) / Size	Qty.

Is the end use an injectable / implantable? ☐ Yes ☐ No Application: _____

Processing Options:**Rinse / Cleaning**

- ☐ Particulate Cleaning
☐ Particulate Cleaning *with Final WFI Rinse*
☐ TOC; Level _____ppb
☐ IPA Wash
☐ HCL Wash

Depyrogenation / Sterilization

- ☐ Depyrogenation
☐ Autoclave
☐ Irradiation (Gamma)*
☐ Other _____

*Stock Type I Glass will discolor after Irradiation

Surface Treatment**

- ☐ Silanization
☐ Siliconization

**Surface treatment is not compatible with all sterilization procedures offered

Secondary Packaging Options:**Sterilization Packaging Configurations for Containers:**

- ☐ Clean Polypropylene Tray Pack
☐ Vacuum Sealed Autoclave Bag
Autoclavable Bags: ☐ Single ☐ Double ☐ Other
Irradiation Bags: ☐ Single ☐ Double ☐ Other
Cleanroom Bags: ☐ Single ☐ Double ☐ Other
☐ Other _____

Sterilization Packaging Configurations for Closures & Stoppers:

- Autoclavable Bags: ☐ Single ☐ Double ☐ Other
Irradiation Bags: ☐ Single ☐ Double ☐ Other
Cleanroom Bags: ☐ Single ☐ Double ☐ Other
☐ Other _____

Certification and Sample Requirements:

- ☐ C of A, Particles / USP <788>
☐ C of A, Endotoxin / USP <85>
☐ C of Sterility / USP <71>
☐ C of A, TOC
☐ Certificate of Processing
☐ No Certifications Required

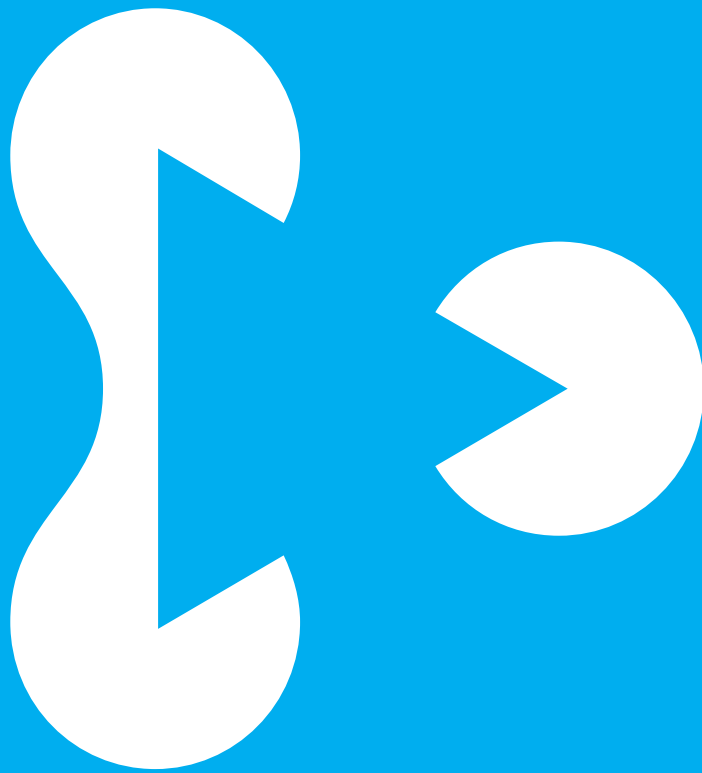
Additional Comments:

Attach and return additional specifications as needed.

Minimum lead-time for custom product is dependent upon quantity, analytical requirements, and availability of materials.

Custom Cleaning Specification Sheet must be signed prior to acceptance of order. Failure to do so will cause your quote to be delayed. All information exchanged between DWK Life Sciences and the above Company is considered to be confidential. DWK Life Sciences will not be responsible for failure by the customer to request any other requirement not included on this sheet.

Signed: _____ Date: _____ Page ____ of ____



Excellence in your hands

Contact us at [DWK.com](https://www.dwk.com)

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