



WHEATON®

μ L MicroLiter®
PRODUCT CATALOG



DURAN
WHEATON
KIMBLE



What Makes MicroLiter Unique?

Not All Autosampler Vial Companies Are Created Equal

MicroLiter was founded in 1996 to supply autosampler vials and consumables for the industry's leading autosamplers. When deciding how to position our company within the multitude of other companies offering vials, we made a fundamental decision to only offer products that offered proven stable performance and avoid those products that had a wide range of tolerances that could impede performance of the autosampler.

We chose to develop products that met the requirements of the customers' demands but also format them in ways that allowed for more efficient transfer of samples from the prep lab to the autosampler. At the same time we also realized that the autosampler vials we offered hold the most expensive solutions produced by the lab. No matter how the sample was prepped, our autosampler vial was the last sample container your sample touched before it became a hazardous waste in the lab. We take this very seriously.

Class 10,000 Clean Room Packed Vials

MicroLiter's stringent cleaning of every autosampler vial that enters our facility makes certain that we provide you with a clean vial for your prepared sample.

Some of our competitors offer "Certified Vials." Could we offer them? Sure, but why? We believe that our competition introduced these vials to compete against our Class 10,000 Clean Room product line when they simply use the lot numbers provided by their vendor. To compete they randomly test a lot by LC / MS and charge you for doing so. That's not the case at MicroLiter. We clean every vial.

We understand the specifications of the autosamplers we support. Consequently, the drawings we've developed to produce the vials we sell are more detailed than the base drawings of other companies. Upon delivery to our facility we receive the vials, check them against our drawings then clean them using our unique process and repackage them in a certified Class 10,000 Clean Room.

The Correct Closures & The Correct Packaging

Closures by their very nature can never be offered as a Class 10,000 Clean Room product unless we individually wrapped each cap with and without septum that we provide. What we offer is a means of delivery that has a user-friendly package that keeps the products clean during transportation to your lab. Once on site we then offer you a dispenser that our packaging integrates with that assists our customers in keeping the closures clean. We work to continually improve the packaging and offer our three inch tubes presealed on one end to reduce our handling of these items to a minimum. Each improvement reduces waste and contamination of the closures.

User-Beneficial Improvements Cost You No More

Unlike our competition, we do not charge you for the extra attention to cleanliness. In fact we take it one step forward by packaging closures in packs of 50 that can be stored in the supplies storeroom in your facility to keep them organized until you are ready to use them.

Our product numbers are frequently cross-referenced to other brands as equivalent. We believe this is unfortunate because there is a clear difference in packaging and manufacturing specifications.

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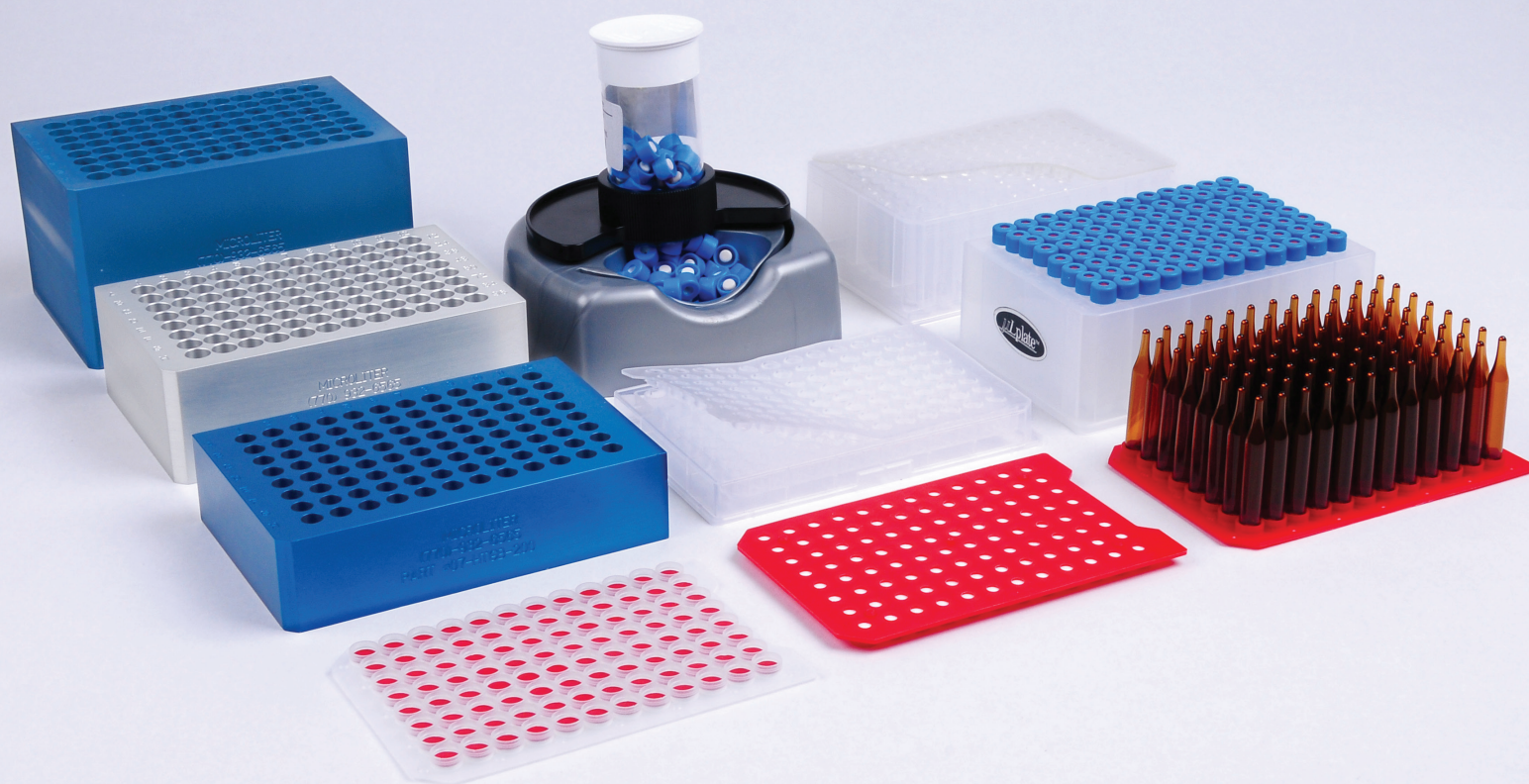
Ordering

- > MicroLiter is happy to process your order by phone, email, facsimile, mail or via our company website. Prices listed on our website are in U.S. Dollars.
- > Forms of acceptable payment are institutional purchase order or credit card. All invoices will be due within 30 days of issuance. With the exception of credit card orders, a 1% discount will be offered to invoices paid within 10 days of issuance. MicroLiter accepts VISA, MasterCard, Discover and American Express credit cards. Prices subject to change without notice.
- > New customers will be required to provide bank and trade references, credit documents and first PO or credit card with initial order.

**For complete Terms & Conditions,
please reference pg. 44**

Instrument Compatibility

> CTC Analytics Combi PAL® Direct Inject	●
> CTC Analytics Headspace PAL®.....	●
> CTC Analytics LC PAL®	●
> CTC Analytics HTC & HTS PAL®	●
> Agilent.....	●
> Alcott / Micromeritics.....	●
> AlphaMOS	●
> Antek.....	○
> Beckman	○
> Dani	○
> Dionex.....	●
> Gerstel.....	●
> Gilson	●
> Hitachi.....	●
> Tecan, TomTec & Hamilton.....	●
> Teledyne Tekmar	○
> ThermoScientific.....	○
> Shimadzu.....	○
> Spark Holland	○
> PerkinElmer.....	○
> Waters	●
> Varian.....	●



High-Throughput Chromatography

MicroLiter Plate Sampling System™

MicroLiter has assembled the right products together to give you a comprehensive listing of the microplates that work best for chromatography. We've done our homework so you don't have to. Before we listed any products, we made sure that we offered you a closure that works the same way you have been accustomed to when working with standard chromatography vials.

Our patented MicroLiter Plate Sampling System™ of microplates, glass inserts, μ Lmats™ and / or caps with chromatography-based septa offer you secure vessels to maintain even the most volatile samples. Our polypropylene μ Lplates® have a variety of closures that will stabilize the sample during the analytical sample run and, if necessary, reseal after the sample has been injected.

We also offer you the security of a stopper coupled with the strength of a patented mechanical closure system that seals the limited volume insert on the inside surface of the insert and compresses the PTFE / Silicone rubber using a mechanical seal so that even GC samples can be converted to 96-well format in our system of microplates. A variety of insert options lets you set the specifications appropriate for your application.

μ Lplates® with Glass Inserts Installed

Don't waste time assembling inserts into microplates. Choose the proper insert and let us deliver it to you in the correct microplate. Next choose the μ Lmats or snap cap with stopper or septa. MicroLiter Plate Sampling System™ has proven itself through its popularity in the market.

- Glass inserts with caps and μ Lmats using standard PTFE / Silicone and PTFE / Butyl Septa
- Heating / cooling blocks with 96-well footprints for dry-down and stabilization of samples
- Mechanical vise for application of μ Lmats
- 96-well microplates with piercible mats

MicroLiter Plate Sampling System™

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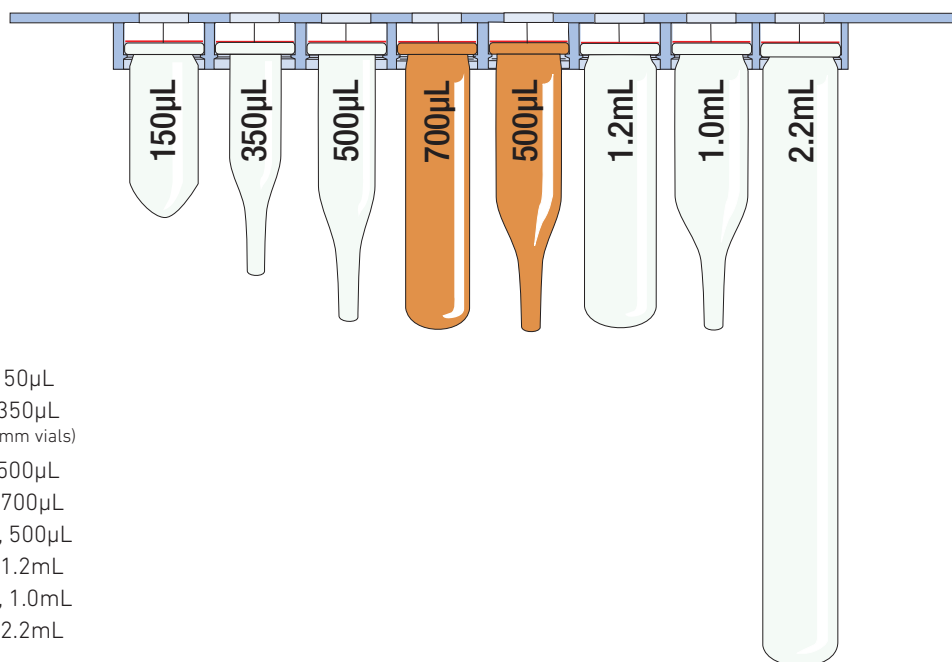


μLplate® Glass Inserts

Cat. No.	Insert Description	Qty / Pack	Carrier μLplate
07-0000-101	150μL Clear Conical	100 / Pack	07-1200 Shallow
07-0000-101-S	Silanized 150μL Clear Conical	100 / Pack	07-1200 Shallow
07-0000-201	350μL Clear Conical	100 / Pack	07-2000 Medium
07-0000-201-S	Silanized 350μL Clear Conical	100 / Pack	07-2000 Medium
07-0000-250*	350uL Clear Round	100 / Pack	07-2000 Medium
07-0000-300	500μL Clear Conical	100 / Pack	07-3900 Deep
07-0000-300-S	Silanized 500μL Clear Conical	100 / Pack	07-3900 Deep
07-0000-350*	500uL Clear Round	100 / Pack	07-3900 Deep
07-0000-1000	1.0mL Clear Conical	100 / Pack	07-8400 Deep
07-0000-1000-S	Silanized 1.0mL Clear Conical	100 / Pack	07-8400 Deep
07-0000-1002	500μL Amber Conical	100 / Pack	07-8400 Deep
07-0000-1200	1.2mL Clear Round	100 / Pack	07-8000 Deep
07-0000-1200-S	Silanized 1.2mL Clear Round	100 / Pack	07-8000 Deep
07-0000-1202	700μL Amber Round	100 / Pack	07-8400 Deep
07-0000-2200	2.2mL Clear Round	100 / Pack	07-8000 Deep
07-0000-2200-S	Silanized 2.2mL Clear Round	100 / Pack	07-8000 Deep

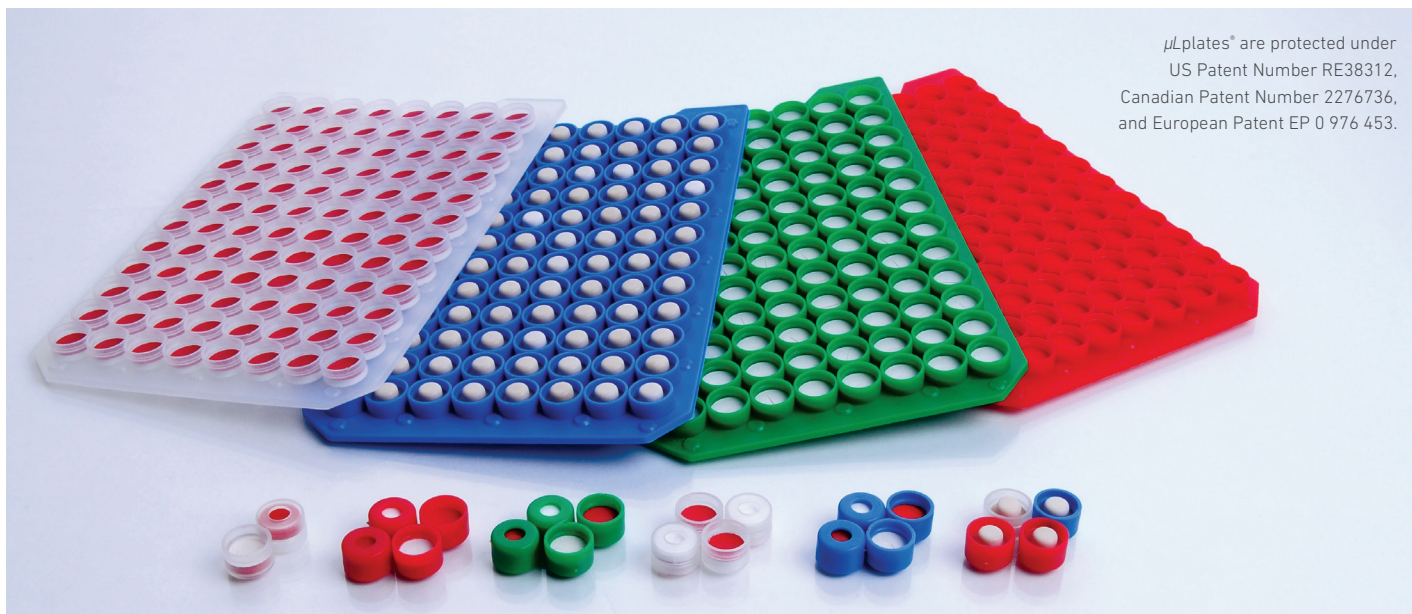
* Not pictured

μLplate® Glass Inserts Chart



Left to right:

- 07-0000-101, Conical Bottom, 150μL
- 07-0000-201, Conical Bottom, 350μL
(similar to a standard insert for 12 x 32mm vials)
- 07-0000-300, Conical Bottom, 500μL
- 07-0000-1202, Round Bottom, 700μL
- 07-0000-1002, Conical Bottom, 500μL
- 07-0000-1200, Round Bottom, 1.2mL
- 07-0000-1000, Conical Bottom, 1.0mL
- 07-0000-2200, Round Bottom, 2.2mL



μ Lplates® are protected under
US Patent Number RE38312,
Canadian Patent Number 2276736,
and European Patent EP 0 976 453.

μ Lplate® Snap Caps & μ Lmats™

Description	Qty / Pack	Blue Caps or μ Lmat™ Cat. No.	Green Caps or μ Lmat Cat. No.	Natural Caps or μ Lmat Cat. No.	Red Caps or μ Lmat Cat. No.
Snap Cap w/ Pre-Cut FEP / Silicone Septa	100	07-0020B	07-0020G	07-0020N	07-0020R
Snap Cap w/ Pre-Cut FEP / Butyl Septa	100	07-0021B	07-0021G	07-0021N	07-0021R
Snap Cap w/ PTFE / Silicone Stopper	100	07-0045B	07-0045G	07-0045N	07-0045R
Snap Cap w/ PTFE / Silicone Septa	100	07-0070B	07-0070G	07-0070N	07-0070R
Snap Cap w/ Pre-Cut PTFE / Silicone Septa	100	07-0075B	07-0075G	07-0075N	07-0075R
μ Lmat w/ Pre-Cut FEP / Silicone Septa	1	07-0020MB	07-0020MG	07-0020MN	07-0020MR
μ Lmat w/ Pre-Cut FEP / Butyl Septa	1	07-0021MB	07-0021MG	07-0021MN	07-0021MR
μ Lmat w/ PTFE / Silicone Stopper	1	07-0045MB	07-0045MG	07-0045MN	07-0045MR
μ Lmat w/ PTFE / Silicone Septa	1	07-0070MB	07-0070MG	07-0070MN	07-0070MR
μ Lmat w/ Pre-Cut PTFE / Silicone Septa	1	07-0075MB	07-0075MG	07-0075MN	07-0075MR

μ Lplates® w/ Glass Inserts Installed



These products are sold as one microplate with 96 inserts installed.
Silanization is available for all glass inserts.

Cat. No.	Insert Description	Carrier μ Lplate	Cat. No. of Insert Installed
07-1200-101	150 μ L Clear Conical	07-1200 Shallow Well	07-0000-101
07-2000-201	350 μ L Clear Conical	07-2000 Medium Well	07-0000-201
07-2000-250	350 μ L Clear Round	07-2000 Medium Well	07-0000-250
07-3000-300	500 μ L Clear Conical	07-3900 Deep Well	07-0000-300
07-3000-350	500 μ L Clear Round	07-3900 Deep Well	07-0000-350
07-8000-1000	1.0mL Clear Conical	07-8400 Deep Well	07-0000-1000
07-8000-1002	500 μ L Amber Conical	07-8400 Deep Well	07-0000-1002
07-8000-1200	1.2mL Clear Round	07-8000 Deep Well	07-0000-1200
07-8000-1202	700 μ L Amber Round	07-8400 Deep Well	07-0000-1202
07-8000-2200	2.2mL Clear Round	07-8000 Deep Well	07-0000-2200



MicroLiter's Cap Dispenser integrates with our packaging to keep closures clean until needed.

MicroLiter Dispenser

Cat. No.	Qty / Kit
00-DISP	Sold Individually w/ Adapter



Red Caps



Green Caps



Natural Caps



Blue Caps

**μLplate® Component Kits**

Kits include one pack of 100 of μLplate Inserts and one pack of Snap Caps. Carrier μLplate sold separately on page 12.

Insert Description	Septa Configuration	Required μL plate	Blue Caps Cat. No.	Green Caps Cat. No.	Natural Caps Cat. No.	Red Caps Cat. No.
150μL Clear Conical	Pre-Cut FEP / Silicone Septa	07-1200	07-0020B-101	07-0020G-101	07-0020N-101	07-0020R-101
350μL Clear Conical	Pre-Cut FEP / Silicone Septa	07-2000	07-0020B-201	07-0020G-201	07-0020N-201	07-0020R-201
350μL Clear Round	Pre-Cut FEP / Silicone Septa	07-2000	07-0020B-250	07-0020G-250	07-0020N-250	07-0020R-250
500μL Clear Conical	Pre-Cut FEP / Silicone Septa	07-3900	07-0020B-300	07-0020G-300	07-0020N-300	07-0020R-300
500μL Clear Round	Pre-Cut FEP / Silicone Septa	07-3900	07-0020B-350	07-0020G-350	07-0020N-350	07-0020R-350
1.0mL Clear Conical	Pre-Cut FEP / Silicone Septa	07-8400	07-0020B-1000	07-0020G-1000	07-0020N-1000	07-0020R-1000
500μL Amber Conical	Pre-Cut FEP / Silicone Septa	07-8400	07-0020B-1002	07-0020G-1002	07-0020N-1002	07-0020R-1002
1.2mL Clear Round	Pre-Cut FEP / Silicone Septa	07-8000	07-0020B-1200	07-0020G-1200	07-0020N-1200	07-0020R-1200
700μL Amber Round	Pre-Cut FEP / Silicone Septa	07-8400	07-0020B-1202	07-0020G-1202	07-0020N-1202	07-0020R-1202
2.2mL Clear Round	Pre-Cut FEP / Silicone Septa	07-8000	07-0020B-2200	07-0020G-2200	07-0020N-2200	07-0020R-2200
150μL Clear Conical	Pre-Cut FEP / Butyl Septa	07-1200	07-0021B-101	07-0021G-101	07-0021N-101	07-0021R-101
350μL Clear Conical	Pre-Cut FEP / Butyl Septa	07-2000	07-0021B-201	07-0021G-201	07-0021N-201	07-0021R-201
350μL Clear Round	Pre-Cut FEP / Butyl Septa	07-2000	07-0021B-250	07-0021G-250	07-0021N-250	07-0021R-250
500μL Clear Conical	Pre-Cut FEP / Butyl Septa	07-3900	07-0021B-300	07-0021G-300	07-0021N-300	07-0021R-300
500μL Clear Round	Pre-Cut FEP / Butyl Septa	07-3900	07-0021B-350	07-0021G-350	07-0021N-350	07-0021R-350
1.0mL Clear Conical	Pre-Cut FEP / Butyl Septa	07-8400	07-0021B-1000	07-0021G-1000	07-0021N-1000	07-0021R-1000
500μL Amber Conical	Pre-Cut FEP / Butyl Septa	07-8400	07-0021B-1002	07-0021G-1002	07-0021N-1002	07-0021R-1002
1.2mL Clear Round	Pre-Cut FEP / Butyl Septa	07-8000	07-0021B-1200	07-0021G-1200	07-0021N-1200	07-0021R-1200
700μL Amber Round	Pre-Cut FEP / Butyl Septa	07-8400	07-0021B-1202	07-0021G-1202	07-0021N-1202	07-0021R-1202
2.2mL Clear Round	Pre-Cut FEP / Butyl Septa	07-8000	07-0021B-2200	07-0021G-2200	07-0021N-2200	07-0021R-2200
150μL Clear Conical	PTFE / Silicone Stopper	07-1200	07-0045B-101	07-0045G-101	07-0045N-101	07-0045R-101
350μL Clear Conical	PTFE / Silicone Stopper	07-2000	07-0045B-201	07-0045G-201	07-0045N-201	07-0045R-201
350μL Clear Round	PTFE / Silicone Stopper	07-2000	07-0045B-250	07-0045G-250	07-0045N-250	07-0045R-250
500μL Clear Conical	PTFE / Silicone Stopper	07-3900	07-0045B-300	07-0045G-300	07-0045N-300	07-0045R-300
500μL Clear Round	PTFE / Silicone Stopper	07-3900	07-0045B-350	07-0045G-350	07-0045N-350	07-0045R-350
1.0mL Clear Conical	PTFE / Silicone Stopper	07-8400	07-0045B-1000	07-0045G-1000	07-0045N-1000	07-0045R-1000
500μL Amber Conical	PTFE / Silicone Stopper	07-8400	07-0045B-1002	07-0045G-1002	07-0045N-1002	07-0045R-1002
1.2mL Clear Round	PTFE / Silicone Stopper	07-8000	07-0045B-1200	07-0045G-1200	07-0045N-1200	07-0045R-1200
700μL Amber Round	PTFE / Silicone Stopper	07-8400	07-0045B-1202	07-0045G-1202	07-0045N-1202	07-0045R-1202
2.2mL Clear Round	PTFE / Silicone Stopper	07-8000	07-0045B-2200	07-0045G-2200	07-0045N-2200	07-0045R-2200
150μL Clear Conical	PTFE / Silicone Septa	07-1200	07-0070B-101	07-0070G-101	07-0070N-101	07-0070R-101
350μL Clear Conical	PTFE / Silicone Septa	07-2000	07-0070B-201	07-0070G-201	07-0070N-201	07-0070R-201
350μL Clear Round	PTFE / Silicone Septa	07-2000	07-0070B-250	07-0070G-250	07-0070N-250	07-0070R-250
500μL Clear Conical	PTFE / Silicone Septa	07-3900	07-0070B-300	07-0070G-300	07-0070N-300	07-0070R-300
500μL Clear Round	PTFE / Silicone Septa	07-3900	07-0070B-350	07-0070G-350	07-0070N-350	07-0070R-350
1.0mL Clear Conical	PTFE / Silicone Septa	07-8400	07-0070B-1000	07-0070G-1000	07-0070N-1000	07-0070R-1000
500μL Amber Conical	PTFE / Silicone Septa	07-8400	07-0070B-1002	07-0070G-1002	07-0070N-1002	07-0070R-1002
1.2mL Clear Round	PTFE / Silicone Septa	07-8000	07-0070B-1200	07-0070G-1200	07-0070N-1200	07-0070R-1200
700μL Amber Round	PTFE / Silicone Septa	07-8400	07-0070B-1202	07-0070G-1202	07-0070N-1202	07-0070R-1202
2.2mL Clear Round	PTFE / Silicone Septa	07-8000	07-0070B-2200	07-0070G-2200	07-0070N-2200	07-0070R-2200
150μL Clear Conical	Pre-Cut PTFE / Silicone Septa	07-1200	07-0075B-101	07-0075G-101	07-0075N-101	07-0075R-101
350μL Clear Conical	Pre-Cut PTFE / Silicone Septa	07-2000	07-0075B-201	07-0075G-201	07-0075N-201	07-0075R-201
350μL Clear Round	Pre-Cut PTFE / Silicone Septa	07-2000	07-0075B-250	07-0075G-250	07-0075N-250	07-0075R-250
500μL Clear Conical	Pre-Cut PTFE / Silicone Septa	07-3900	07-0075B-300	07-0075G-300	07-0075N-300	07-0075R-300
500μL Clear Round	Pre-Cut PTFE / Silicone Septa	07-3900	07-0075B-350	07-0075G-350	07-0075N-350	07-0075R-350
1.0mL Clear Conical	Pre-Cut PTFE / Silicone Septa	07-8400	07-0075B-1000	07-0075G-1000	07-0075N-1000	07-0075R-1000
500μL Amber Conical	Pre-Cut PTFE / Silicone Septa	07-8400	07-0075B-1002	07-0075G-1002	07-0075N-1002	07-0075R-1002
1.2mL Clear Round	Pre-Cut PTFE / Silicone Septa	07-8000	07-0075B-1200	07-0075G-1200	07-0075N-1200	07-0075R-1200
700μL Amber Round	Pre-Cut PTFE / Silicone Septa	07-8400	07-0075B-1202	07-0075G-1202	07-0075N-1202	07-0075R-1202
2.2mL Clear Round	Pre-Cut PTFE / Silicone Septa	07-8000	07-0075B-2200	07-0075G-2200	07-0075N-2200	07-0075R-2200



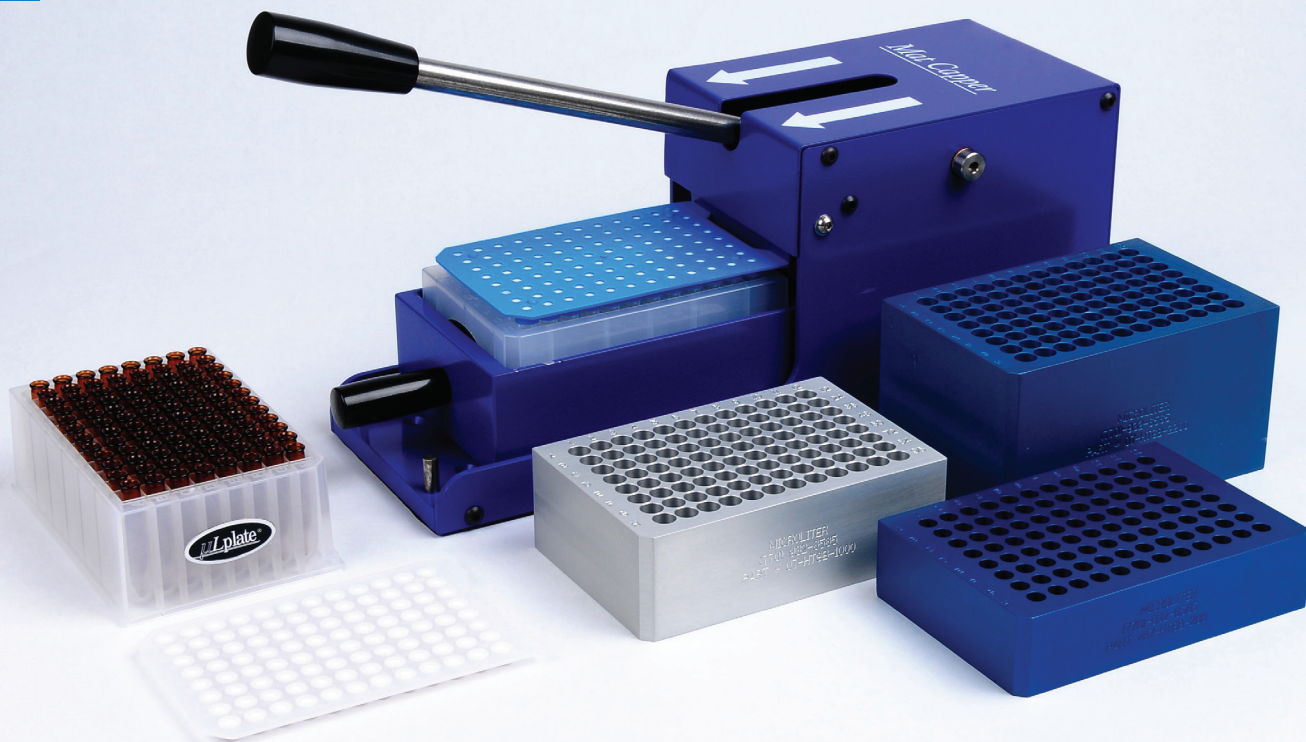
One μ Lplate® w/ Inserts Installed & One Pack of Snap Caps w/ Septa

These product numbers ship with inserts installed in a microplate and caps in separate packaging. If you don't use large numbers of microplates with inserts or you want to access certain wells for further work, this package configuration works quite well. The inserts are installed in the microplate, and a separate pack of caps is supplied that can be used with our dispenser.



One μ Lplate® w/ Caps w/ Septa Installed on Inserts

Blue Caps Cat. No.	Green Caps Cat. No.	Natural Caps Cat. No.	Red Caps Cat. No.	Blue Caps Cat. No.	Green Caps Cat. No.	Natural Caps Cat. No.	Red Caps Cat. No.
07-1220B-101	07-1220G-101	07-1220N-101	07-1220R-101	07-1220B-101-A	07-1220G-101-A	07-1220N-101-A	07-1220R-101-A
07-2020B-201	07-2020G-201	07-2020N-201	07-2020R-201	07-2020B-201-A	07-2020G-201-A	07-2020N-201-A	07-2020R-201-A
07-2020B-250	07-2020G-250	07-2020N-250	07-2020R-250	07-2020B-250-A	07-2020G-250-A	07-2020N-250-A	07-2020R-250-A
07-3020B-300	07-3020G-300	07-3020N-300	07-3020R-300	07-3020B-300-A	07-3020G-300-A	07-3020N-300-A	07-3020R-300-A
07-3020B-350	07-3020G-350	07-3020N-350	07-3020R-350	07-3020B-350-A	07-3020G-350-A	07-3020N-350-A	07-3020R-350-A
07-8020B-1000	07-8020G-1000	07-8020N-1000	07-8020R-1000	07-8020B-1000-A	07-8020G-1000-A	07-8020N-1000-A	07-8020R-1000-A
07-8020B-1002	07-8020G-1002	07-8020N-1002	07-8020R-1002	07-8020B-1002-A	07-8020G-1002-A	07-8020N-1002-A	07-8020R-1002-A
07-8020B-1200	07-8020G-1200	07-8020N-1200	07-8020R-1200	07-8020B-1200-A	07-8020G-1200-A	07-8020N-1200-A	07-8020R-1200-A
07-8020B-1202	07-8020G-1202	07-8020N-1202	07-8020R-1202	07-8020B-1202-A	07-8020G-1202-A	07-8020N-1202-A	07-8020R-1202-A
07-8020B-2200	07-8020G-2200	07-8020N-2200	07-8020R-2200	07-8020B-2200-A	07-8020G-2200-A	07-8020N-2200-A	07-8020R-2200-A
07-1221B-101	07-1221G-101	07-1221N-101	07-1221R-101	07-1221B-101-A	07-1221G-101-A	07-1221N-101-A	07-1221R-101-A
07-2021B-201	07-2021G-201	07-2021N-201	07-2021R-201	07-2021B-201-A	07-2021G-201-A	07-2021N-201-A	07-2021R-201-A
07-2021B-250	07-2021G-250	07-2021N-250	07-2021R-250	07-2021B-250-A	07-2021G-250-A	07-2021N-250-A	07-2021R-250-A
07-3021B-300	07-3021G-300	07-3021N-300	07-3021R-300	07-3021B-300-A	07-3021G-300-A	07-3021N-300-A	07-3021R-300-A
07-3021B-350	07-3021G-350	07-3021N-350	07-3021R-350	07-3021B-350-A	07-3021G-350-A	07-3021N-350-A	07-3021R-350-A
07-8021B-1000	07-8021G-1000	07-8021N-1000	07-8021R-1000	07-8021B-1000-A	07-8021G-1000-A	07-8021N-1000-A	07-8021R-1000-A
07-8021B-1002	07-8021G-1002	07-8021N-1002	07-8021R-1002	07-8021B-1002-A	07-8021G-1002-A	07-8021N-1002-A	07-8021R-1002-A
07-8021B-1200	07-8021G-1200	07-8021N-1200	07-8021R-1200	07-8021B-1200-A	07-8021G-1200-A	07-8021N-1200-A	07-8021R-1200-A
07-8021B-1202	07-8021G-1202	07-8021N-1202	07-8021R-1202	07-8021B-1202-A	07-8021G-1202-A	07-8021N-1202-A	07-8021R-1202-A
07-8021B-2200	07-8021G-2200	07-8021N-2200	07-8021R-2200	07-8021B-2200-A	07-8021G-2200-A	07-8021N-2200-A	07-8021R-2200-A
07-1245B-101	07-1245G-101	07-1245N-101	07-1245R-101	07-1245B-101-A	07-1245G-101-A	07-1245N-101-A	07-1245R-101-A
07-2045B-201	07-2045G-201	07-2045N-201	07-2045R-201	07-2045B-201-A	07-2045G-201-A	07-2045N-201-A	07-2045R-201-A
07-2045B-250	07-2045G-250	07-2045N-250	07-2045R-250	07-2045B-250-A	07-2045G-250-A	07-2045N-250-A	07-2045R-250-A
07-3045B-300	07-3045G-300	07-3045N-300	07-3045R-300	07-3045B-300-A	07-3045G-300-A	07-3045N-300-A	07-3045R-300-A
07-3045B-350	07-3045G-350	07-3045N-350	07-3045R-350	07-3045B-350-A	07-3045G-350-A	07-3045N-350-A	07-3045R-350-A
07-8045B-1000	07-8045G-1000	07-8045N-1000	07-8045R-1000	07-8045B-1000-A	07-8045G-1000-A	07-8045N-1000-A	07-8045R-1000-A
07-8045B-1002	07-8045G-1002	07-8045N-1002	07-8045R-1002	07-8045B-1002-A	07-8045G-1002-A	07-8045N-1002-A	07-8045R-1002-A
07-8045B-1200	07-8045G-1200	07-8045N-1200	07-8045R-1200	07-8045B-1200-A	07-8045G-1200-A	07-8045N-1200-A	07-8045R-1200-A
07-8045B-1202	07-8045G-1202	07-8045N-1202	07-8045R-1202	07-8045B-1202-A	07-8045G-1202-A	07-8045N-1202-A	07-8045R-1202-A
07-8045B-2200	07-8045G-2200	07-8045N-2200	07-8045R-2200	07-8045B-2200-A	07-8045G-2200-A	07-8045N-2200-A	07-8045R-2200-A
07-1270B-101	07-1270G-101	07-1270N-101	07-1270R-101	07-1270B-101-A	07-1270G-101-A	07-1270N-101-A	07-1270R-101-A
07-2070B-201	07-2070G-201	07-2070N-201	07-2070R-201	07-2070B-201-A	07-2070G-201-A	07-2070N-201-A	07-2070R-201-A
07-2070B-250	07-2070G-250	07-2070N-250	07-2070R-250	07-2070B-250-A	07-2070G-250-A	07-2070N-250-A	07-2070R-250-A
07-3070B-300	07-3070G-300	07-3070N-300	07-3070R-300	07-3070B-300-A	07-3070G-300-A	07-3070N-300-A	07-3070R-300-A
07-3070B-350	07-3070G-350	07-3070N-350	07-3070R-350	07-3070B-350-A	07-3070G-350-A	07-3070N-350-A	07-3070R-350-A
07-8070B-1000	07-8070G-1000	07-8070N-1000	07-8070R-1000	07-8070B-1000-A	07-8070G-1000-A	07-8070N-1000-A	07-8070R-1000-A
07-8070B-1002	07-8070G-1002	07-8070N-1002	07-8070R-1002	07-8070B-1002-A	07-8070G-1002-A	07-8070N-1002-A	07-8070R-1002-A
07-8070B-1200	07-8070G-1200	07-8070N-1200	07-8070R-1200	07-8070B-1200-A	07-8070G-1200-A	07-8070N-1200-A	07-8070R-1200-A
07-8070B-1202	07-8070G-1202	07-8070N-1202	07-8070R-1202	07-8070B-1202-A	07-8070G-1202-A	07-8070N-1202-A	07-8070R-1202-A
07-8070B-2200	07-8070G-2200	07-8070N-2200	07-8070R-2200	07-8070B-2200-A	07-8070G-2200-A	07-8070N-2200-A	07-8070R-2200-A
07-1275B-101	07-1275G-101	07-1275N-101	07-1275R-101	07-1275B-101-A	07-1275G-101-A	07-1275N-101-A	07-1275R-101-A
07-2075B-201	07-2075G-201	07-2075N-201	07-2075R-201	07-2075B-201-A	07-2075G-201-A	07-2075N-201-A	07-2075R-201-A
07-2075B-250	07-2075G-250	07-2075N-250	07-2075R-250	07-2075B-250-A	07-2075G-250-A	07-2075N-250-A	07-2075R-250-A
07-3075B-300	07-3075G-300	07-3075N-300	07-3075R-300	07-3075B-300-A	07-3075G-300-A	07-3075N-300-A	07-3075R-300-A
07-3075B-350	07-3075G-350	07-3075N-350	07-3075R-350	07-3075B-350-A	07-3075G-350-A	07-3075N-350-A	07-3075R-350-A
07-8075B-1000	07-8075G-1000	07-8075N-1000	07-8075R-1000	07-8075B-1000-A	07-8075G-1000-A	07-8075N-1000-A	07-8075R-1000-A
07-8075B-1002	07-8075G-1002	07-8075N-1002	07-8075R-1002	07-8075B-1002-A	07-8075G-1002-A	07-8075N-1002-A	07-8075R-1002-A
07-8075B-1200	07-8075G-1200	07-8075N-1200	07-8075R-1200	07-8075B-1200-A	07-8075G-1200-A	07-8075N-1200-A	07-8075R-1200-A
07-8075B-1202	07-8075G-1202	07-8075N-1202	07-8075R-1202	07-8075B-1202-A	07-8075G-1202-A	07-8075N-1202-A	07-8075R-1202-A
07-8075B-2200	07-8075G-2200	07-8075N-2200	07-8075R-2200	07-8075B-2200-A	07-8075G-2200-A	07-8075N-2200-A	07-8075R-2200-A



MicroLiter Plate Sampling System™ has benefits that can only be realized by incorporating all of the components of our system

MicroLiter Plate Sampling System™ Accessories

- Aluminum Heating Blocks that concentrate desired heat range next to the sample for superior well-to-well consistency
- μ Lmat Vise™ configurations for both standard height and extended height μ Lplate®
- Optional VELCRO® brand strap holds mat in place as pressure builds inside inserts

Cat. No.	Description	Qty / Pack
Heating Blocks		
07-HTGB-100	Aluminum Heating Block for 150 μ L Inserts	1
07-HTGB-300	Aluminum Heating Block for 500 μ L Inserts in LEAP Three Drawer Peltier Cooling Stack	1
07-HTGB-301	Aluminum Heating Block for 500 μ L Inserts	1
07-HTGB-1000	Aluminum Heating Block for 1.0mL & 1.2mL Inserts	1
07-HTGB-2200	Aluminum Heating Block for 2.2mL Inserts	1
Heating Rack		
07-HTGB-150	Aluminum Heating Rack for 150 μ L Inserts	1
μLmat Vise™		
07-0000-C	μ Lmat Vise, Caps Both Shallow & Deep Well	1
07-0000-CT	Taller μ Lmat Vise for 07-0000-2200-Series μ Lplate	1
VELCRO® Brand Straps for High Temp Applications		
07-0000-VS	VELCRO Brand Straps	2



VELCRO® Brand Straps

The most convenient configuration for those who use large numbers of microplates with inserts. Simply fill the inserts and place the μ Lmat™ on top. Carefully place the two in the microplate vise, pull the lever and listen for the snap. Once applied, the inserts can be lifted in bulk for a quick visual check or movement to an aluminum heating/cooling block.

MicroLiter Plate Sampling System™ of μ Lmats™ & Glass Inserts in 96-Well μ Lplates®

These products ship with inserts installed in a microplate and a detached μ Lmat.

To view the glass insert sizing chart, see pg. 4.



Insert Description	Septa Configuration	μ Lplate	Blue μ Lmat Cat. No.	Green μ Lmat Cat. No.	Natural μ Lmat Cat. No.	Red μ Lmat Cat. No.
150 μ L Clear Conical	Pre-Cut FEP / Silicone	Shallow	07-1220MB-101	07-1220MG-101	07-1220MN-101	07-1220MR-101
350 μ L Clear Conical	Pre-Cut FEP / Silicone	Medium	07-2020MB-201	07-2020MG-201	07-2020MN-201	07-2020MR-201
350 μ L Clear Round	Pre-Cut FEP / Silicone	Medium	07-2020MB-250	07-2020MG-250	07-2020MN-250	07-2020MR-250
500 μ L Clear Conical	Pre-Cut FEP / Silicone	Deep	07-3020MB-300	07-3020MG-300	07-3020MN-300	07-3020MR-300
500 μ L Clear Round	Pre-Cut FEP / Silicone	Deep	07-3020MB-350	07-3020MG-350	07-3020MN-350	07-3020MR-350
1.0mL Clear Conical	Pre-Cut FEP / Silicone	Deep	07-8020MB-1000	07-8020MG-1000	07-8020MN-1000	07-8020MR-1000
500 μ L Amber Conical	Pre-Cut FEP / Silicone	Deep	07-8020MB-1002	07-8020MG-1002	07-8020MN-1002	07-8020MR-1002
1.2mL Clear Round	Pre-Cut FEP / Silicone	Deep	07-8020MB-1200	07-8020MG-1200	07-8020MN-1200	07-8020MR-1200
700 μ L Amber Round	Pre-Cut FEP / Silicone	Deep	07-8020MB-1202	07-8020MG-1202	07-8020MN-1202	07-8020MR-1202
2.2mL Clear Round	Pre-Cut FEP / Silicone	Deep	07-8020MB-2200	07-8020MG-2200	07-8020MN-2200	07-8020MR-2200
150 μ L Clear Conical	Pre-Cut FEP / Butyl	Shallow	07-1221MB-101	07-1221MG-101	07-1221MN-101	07-1221MR-101
350 μ L Clear Conical	Pre-Cut FEP / Butyl	Medium	07-2021MB-201	07-2021MG-201	07-2021MN-201	07-2021MR-201
350 μ L Clear Round	Pre-Cut FEP / Butyl	Medium	07-2021MB-250	07-2021MG-250	07-2021MN-250	07-2021MR-250
500 μ L Clear Conical	Pre-Cut FEP / Butyl	Deep	07-3021MB-300	07-3021MG-300	07-3021MN-300	07-3021MR-300
500 μ L Clear Round	Pre-Cut FEP / Butyl	Deep	07-3021MB-350	07-3021MG-350	07-3021MN-350	07-3021MR-350
1.0mL Clear Conical	Pre-Cut FEP / Butyl	Deep	07-8021MB-1000	07-8021MG-1000	07-8021MN-1000	07-8021MR-1000
500 μ L Amber Conical	Pre-Cut FEP / Butyl	Deep	07-8021MB-1002	07-8021MG-1002	07-8021MN-1002	07-8021MR-1002
1.2mL Clear Round	Pre-Cut FEP / Butyl	Deep	07-8021MB-1200	07-8021MG-1200	07-8021MN-1200	07-8021MR-1200
700 μ L Amber Round	Pre-Cut FEP / Butyl	Deep	07-8021MB-1202	07-8021MG-1202	07-8021MN-1202	07-8021MR-1202
2.2mL Clear Round	Pre-Cut FEP / Butyl	Deep	07-8021MB-2200	07-8021MG-2200	07-8021MN-2200	07-8021MR-2200
150 μ L Clear Conical	PTFE / Silicone Stopper	Shallow	07-1245MB-101	07-1245MG-101	07-1245MN-101	07-1245MR-101
350 μ L Clear Conical	PTFE / Silicone Stopper	Medium	07-2045MB-201	07-2045MG-201	07-2045MN-201	07-2045MR-201
350 μ L Clear Round	PTFE / Silicone Stopper	Medium	07-2045MB-250	07-2045MG-250	07-2045MN-250	07-2045MR-250
500 μ L Clear Conical	PTFE / Silicone Stopper	Deep	07-3045MB-300	07-3045MG-300	07-3045MN-300	07-3045MR-300
500 μ L Clear Round	PTFE / Silicone Stopper	Deep	07-3045MB-350	07-3045MG-350	07-3045MN-350	07-3045MR-350
1.0mL Clear Conical	PTFE / Silicone Stopper	Deep	07-8045MB-1000	07-8045MG-1000	07-8045MN-1000	07-8045MR-1000
500 μ L Amber Conical	PTFE / Silicone Stopper	Deep	07-8045MB-1002	07-8045MG-1002	07-8045MN-1002	07-8045MR-1002
1.2mL Clear Round	PTFE / Silicone Stopper	Deep	07-8045MB-1200	07-8045MG-1200	07-8045MN-1200	07-8045MR-1200
700 μ L Amber Round	PTFE / Silicone Stopper	Deep	07-8045MB-1202	07-8045MG-1202	07-8045MN-1202	07-8045MR-1202
2.2mL Clear Round	PTFE / Silicone Stopper	Deep	07-8045MB-2200	07-8045MG-2200	07-8045MN-2200	07-8045MR-2200
150 μ L Clear Conical	PTFE / Silicone Septa	Shallow	07-1270MB-101	07-1270MG-101	07-1270MN-101	07-1270MR-101
350 μ L Clear Conical	PTFE / Silicone Septa	Medium	07-2070MB-201	07-2070MG-201	07-2070MN-201	07-2070MR-201
350 μ L Clear Round	PTFE / Silicone Septa	Medium	07-2070MB-250	07-2070MG-250	07-2070MN-250	07-2070MR-250
500 μ L Clear Conical	PTFE / Silicone Septa	Deep	07-3070MB-300	07-3070MG-300	07-3070MN-300	07-3070MR-300
500 μ L Clear Round	PTFE / Silicone Septa	Deep	07-3070MB-350	07-3070MG-350	07-3070MN-350	07-3070MR-350
1.0mL Clear Conical	PTFE / Silicone Septa	Deep	07-8070MB-1000	07-8070MG-1000	07-8070MN-1000	07-8070MR-1000
500 μ L Amber Conical	PTFE / Silicone Septa	Deep	07-8070MB-1002	07-8070MG-1002	07-8070MN-1002	07-8070MR-1002
1.2mL Clear Round	PTFE / Silicone Septa	Deep	07-8070MB-1200	07-8070MG-1200	07-8070MN-1200	07-8070MR-1200
700 μ L Amber Round	PTFE / Silicone Septa	Deep	07-8070MB-1202	07-8070MG-1202	07-8070MN-1202	07-8070MR-1202
2.2mL Clear Round	PTFE / Silicone Septa	Deep	07-8070MB-2200	07-8070MG-2200	07-8070MN-2200	07-8070MR-2200
150 μ L Clear Conical	Pre-Cut PTFE / Silicone	Shallow	07-1275MB-101	07-1275MG-101	07-1275MN-101	07-1275MR-101
350 μ L Clear Conical	Pre-Cut PTFE / Silicone	Medium	07-2075MB-201	07-2075MG-201	07-2075MN-201	07-2075MR-201
350 μ L Clear Round	Pre-Cut PTFE / Silicone	Medium	07-2075MB-250	07-2075MG-250	07-2075MN-250	07-2075MR-250
500 μ L Clear Conical	Pre-Cut PTFE / Silicone	Deep	07-3075MB-300	07-3075MG-300	07-3075MN-300	07-3075MR-300
500 μ L Clear Round	Pre-Cut PTFE / Silicone	Deep	07-3075MB-350	07-3075MG-350	07-3075MN-350	07-3075MR-350
1.0mL Clear Conical	Pre-Cut PTFE / Silicone	Deep	07-8075MB-1000	07-8075MG-1000	07-8075MN-1000	07-8075MR-1000
500 μ L Amber Conical	Pre-Cut PTFE / Silicone	Deep	07-8075MB-1002	07-8075MG-1002	07-8075MN-1002	07-8075MR-1002
1.2mL Clear Round	Pre-Cut PTFE / Silicone	Deep	07-8075MB-1200	07-8075MG-1200	07-8075MN-1200	07-8075MR-1200
700 μ L Amber Round	Pre-Cut PTFE / Silicone	Deep	07-8075MB-1202	07-8075MG-1202	07-8075MN-1202	07-8075MR-1202
2.2mL Clear Round	Pre-Cut PTFE / Silicone	Deep	07-8075MB-2200	07-8075MG-2200	07-8075MN-2200	07-8075MR-2200



Make the Switch to MicroLiter's Proprietary 96-Well μ Lplates® and Mats

MicroLiter Offers Four Profiles in Natural Polypropylene 96-Well Microplates, Six Ethylene Vinyl Acetate and PTFE-Coated Silicone Piercible μ Lmats™

Polypropylene Microplates in Natural

- 500 μ L Medium Round Well / Round Bottom
- 1.3mL Round Well / Round Bottom
- 2.0mL Square Well / Conical Bottom
- 2.0mL Square Well / Round Bottom

Piercible μ Lmats™

- Round Well Ethylene Vinyl Acetate in Natural
- Square Well Ethylene Vinyl Acetate in Natural
- Pre-Cut Square Well Silicone with Sprayed-On PTFE
- Round Well Silicone with Sprayed-On PTFE
- Pre-Cut Round Well Silicone with Sprayed-On PTFE, Thin
- Square Well Silicone with Sprayed-On PTFE, Thin

MicroLiter also has developed a proprietary product line of 96-well square and round well microplates and piercible mat covers.

96-well round and square well microplates are made of polypropylene and available in a variety of volumes. All are made to ANSI specifications for 96-well microplates. 96-well round and square well covers made of Ethylene Vinyl Acetate (EVA) are piercible by standard needle configurations found on most HPLC, LC / MS, CombiChem and HTS instruments and have a superior seal to similar products.

For those who need some level of resealability, we also have four silicone mats with a sprayed-on PTFE barrier for a very affordable price. Silicone mats are available in standard and pre-cut round and square well formats.

μ Lplate® 96-Well Polypropylene Microplates

Cat. No.	Description	Qty
07-2000	500 μ L Round Well / Round Bottom, Medium Well	1
07-3900	1.3mL Round Well / Round Bottom, Deep Well	1
07-7400	2.0mL Square Well / Conical Bottom, Deep Well	1
07-8400	2.0mL Square Well / Round Bottom, Deep Well	1

μ Lplate® Covers for 96-Well Polypropylene Microplates

Cat. No.	Description	Qty
07-0011N	Cover for Round Well μ Lplates, EVA	1
07-0017N	Cover for Square Well μ Lplates, EVA	1
07-0061N	Silicone with Sprayed-On PTFE Cover for Square Well μ Lplates, Pre-Cut	1
07-0065N	Silicone with Sprayed-On PTFE Cover for Round Well μ Lplates	1
07-0066N	Silicone with Sprayed-On PTFE Cover for Round Well μ Lplates, Pre-Cut, Thin	1
07-0067N	Silicone with Sprayed-On PTFE Cover for Square Well μ Lplates, Thin	1

μLplate® Component Kits, Polypropylene Plates & Covers

Kits include one μLplate and cover

Cat. No.	Cover Description	Qty / Kit
07-1000, 350μL, Shallow, Round Well / Flat Bottom		
07-1010N	07-0010N Cover	1
07-1011N	07-0011N Piercible Cover	1
07-1063N	07-0063N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-1065N	07-0065N PTFE / Silicone Piercible Cover	1
07-1066N	07-0066N PTFE / Silicone Piercible Cover, Pre-Cut, Thin	1

07-1100, 350μL, Shallow, Round Well / Round Bottom		
07-1110N	07-0010N Cover	1
07-1111N	07-0011N Piercible Cover	1
07-1163N	07-0063N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-1165N	07-0065N PTFE / Silicone Piercible Cover	1
07-1166N	07-0066N PTFE / Silicone Piercible Cover, Pre-Cut, Thin	1

07-1200, 350μL, Shallow, Round Well / Conical Bottom		
07-1210N	07-0010N Cover	1
07-1211N	07-0011N Piercible Cover	1
07-1263N	07-0063N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-1265N	07-0065N PTFE / Silicone Piercible Cover	1
07-1266N	07-0066N PTFE / Silicone Piercible Cover, Pre-Cut, Thin	1

07-2000, 500μL, Medium, Round Well / Round Bottom		
07-2010N	07-0010N Cover	1
07-2011N	07-0011N Piercible Cover	1
07-2063N	07-0063N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-2065N	07-0065N PTFE / Silicone Piercible Cover	1
07-2066N	07-0066N PTFE / Silicone Piercible Cover, Pre-Cut, Thin	1

07-2100, 500μL, Medium, Round Well / Round Bottom		
07-2110N	07-0010N Cover	1
07-2111N	07-0011N Piercible Cover	1
07-2163N	07-0063N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-2165N	07-0065N PTFE / Silicone Piercible Cover	1
07-2166N	07-0066N PTFE / Silicone Piercible Cover, Pre-Cut, Thin	1

07-3000, 1.3mL, Deep, Round Well / Round Bottom		
07-3010N	07-0010N Cover	1
07-3011N	07-0011N Piercible Cover	1
07-3063N	07-0063N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-3065N	07-0065N PTFE / Silicone Piercible Cover	1
07-3066N	07-0066N PTFE / Silicone Piercible Cover, Pre-Cut, Thin	1

07-3900, 1.3mL, Deep, Round Well / Round Bottom		
07-3410N	07-0010N Cover	1
07-3411N	07-0011N Piercible Cover	1
07-3463N	07-0063N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-3465N	07-0065N PTFE / Silicone Piercible Cover	1
07-3466N	07-0066N PTFE / Silicone Piercible Cover, Pre-Cut, Thin	1

Cat. No.	Cover Description	Qty / Kit
07-5000, 350μL, Deep, Square Well / Conical Bottom		
07-5015N	07-0015N Piercible Cover	1
07-5017N	07-0017N Piercible Cover	1
07-5060N	07-0060N PTFE / Silicone Piercible Cover	1
07-5061N	07-0061N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-5067N	07-0067N PTFE / Silicone Piercible Cover, Thin	1

07-6000, 1.0mL, Deep, Square Well / Conical Bottom		
07-6015N	07-0015N Piercible Cover	1
07-6017N	07-0017N Piercible Cover	1
07-6060N	07-0060N PTFE / Silicone Piercible Cover	1
07-6061N	07-0061N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-6067N	07-0067N PTFE / Silicone Piercible Cover, Thin	1

07-7000, 2.0mL, Deep, Square Well / Conical Bottom		
07-7015N	07-0015N Piercible Cover	1
07-7017N	07-0017N Piercible Cover	1
07-7060N	07-0060N PTFE / Silicone Piercible Cover	1
07-7061N	07-0061N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-7067N	07-0067N PTFE / Silicone Piercible Cover, Thin	1

07-7400, 2.0mL, Deep, Square Well / Conical Bottom		
07-7415N	07-0015N Piercible Cover	1
07-7417N	07-0017N Piercible Cover	1
07-7460N	07-0060N PTFE / Silicone Piercible Cover	1
07-7461N	07-0061N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-7467N	07-0067N PTFE / Silicone Piercible Cover, Thin	1

07-8000, 2.0mL, Deep, Square Well / Round Bottom		
07-8015N	07-0015N Piercible Cover	1
07-8017N	07-0017N Piercible Cover	1
07-8060N	07-0060N PTFE / Silicone Piercible Cover	1
07-8061N	07-0061N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-8067N	07-0067N PTFE / Silicone Piercible Cover, Thin	1

07-8400, 2.0mL, Deep, Square Well / Round Bottom		
07-8415N	07-0015N Piercible Cover	1
07-8417N	07-0017N Piercible Cover	1
07-8460N	07-0060N PTFE / Silicone Piercible Cover	1
07-8461N	07-0061N PTFE / Silicone Piercible Cover, Pre-Cut	1
07-8467N	07-0067N PTFE / Silicone Piercible Cover, Thin	1



μLplates® with Covers Under One Product Number

Comprehensive Listings of Polypropylene 96-Well μ Lplates® & Piercible Mats

MicroLiter has a product line of polypropylene microplates and piercible covers that offers secure sample containment throughout the analytical sample run. Whether you want to simply stabilize the sample until it's injected or if you want some measure of stability, even after the sample run has finished, we have the solution. To do so we offer two mats, an EVA mat that stabilizes the sample yet is piercible by most instruments and a silicone mat that has the resealing qualities of standard autosampler vial septa.

MicroLiter offers microplates in two configurations, round well and square well. Any round well mat will fit any round well microplate. Likewise, any square well mat will fit any square well microplate.

μ Lplate® Covers for 96-Well Microplates

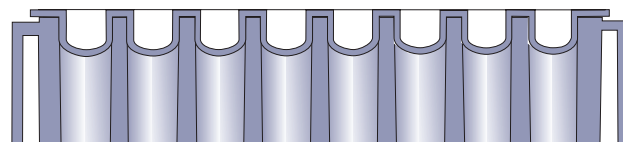
Cat. No.	Description	Qty
07-0010N	Cover for Round Well μ Lplates, EVA	1
07-0011N	Piercible Cover for All Round Well μ Lplates, EVA	1
07-0015N	Piercible Cover for All Square Well μ Lplates, EVA	1
07-0017N	Piercible Cover for All Square Well μ Lplates, EVA	1
07-0060N	Silicone Mat w/ Sprayed-On PTFE Barrier Square Well	1
07-0061N	Silicone Mat w/ Sprayed-On PTFE Barrier, Square Well, Pre-Cut	1
07-0061Y	Yellow Silicone Mat w/ Sprayed-On PTFE Barrier, Square Well, Pre-Cut	1
07-0063N	Silicone Mat w/ Sprayed-On PTFE Barrier, Round Well, Pre-Cut	1
07-0065N	Silicone Mat w/ Sprayed-On PTFE Barrier, Round Well	1
07-0066N	Silicone Mat w/ Sprayed-On PTFE Barrier, Round Well, Pre-Cut, Thin	1
07-0066N-B	Silicone Mat w/ Sprayed-On PTFE Barrier, Round Well, Pre-Cut, Bulk	10
07-0067N	Silicone Mat w/ Sprayed-On PTFE Barrier, Square Well, Thin	1

Shallow & Medium μ Lplates®, Polypropylene

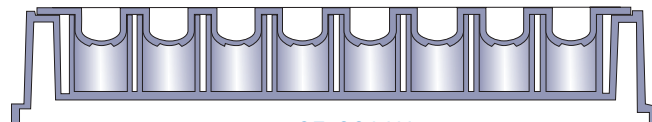
Cat. No.	Description	Qty
07-1000	350 μ L, Polypropylene, Shallow, Round Well / Flat Bottom	1
07-1100	350 μ L, Polypropylene, Shallow, Round Well / Round Bottom	1
07-1200	350 μ L, Polypropylene, Shallow, Round Well / Conical Bottom	1
07-2000	500 μ L, Polypropylene, Medium, Round Well / Round Bottom	1
07-2100	500 μ L, Polypropylene, Medium, Round Well / Round Bottom	1
07-2100-B	500 μ L, PP, Medium, Round Well / Round Bottom, Bulk	10

Deep μ Lplates®, Polypropylene

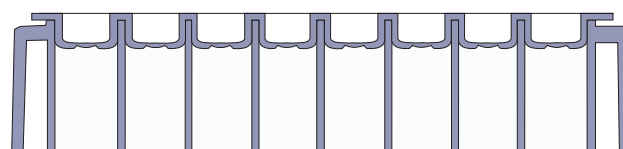
Cat. No.	Description	Qty
07-3000	1.3mL, Polypropylene, Deep, Round Well / Round Bottom	1
07-3900	1.3mL, Polypropylene, Deep, Round Well / Round Bottom	1
07-5000	350 μ L, Polypropylene, Deep, Square Well / Conical Bottom	1
07-6000	1.0mL, Polypropylene, Deep, Square Well / Conical Bottom	1
07-7000	2.0mL, Polypropylene, Deep, Square Well / Conical Bottom	1
07-7400	2.0mL, Polypropylene, Deep, Square Well / Conical Bottom	1
07-8000	2.0mL, Polypropylene, Deep, Square Well / Round Bottom	1
07-8400	2.0mL, Polypropylene, Deep, Square Well / Round Bottom	1



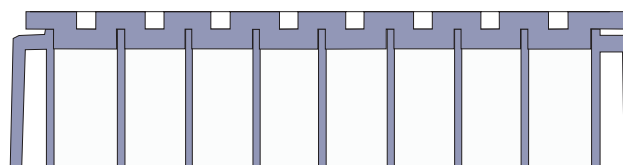
07-0010N



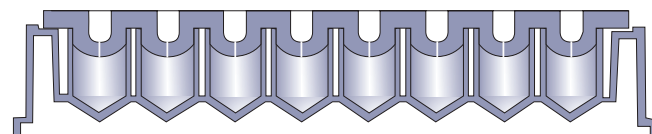
07-0011N



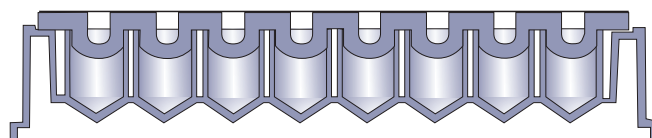
07-0015N & 07-0017N



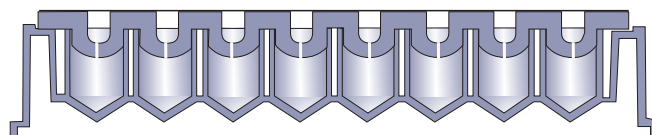
07-0060N



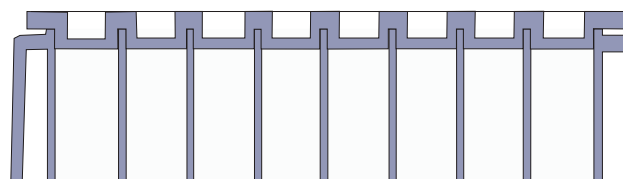
07-0063N



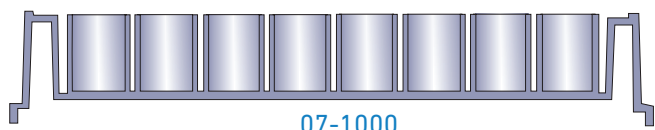
07-0065N



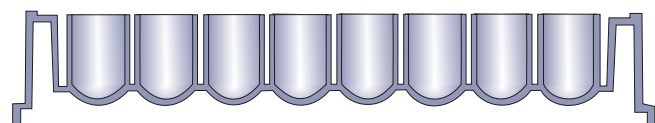
07-0066N



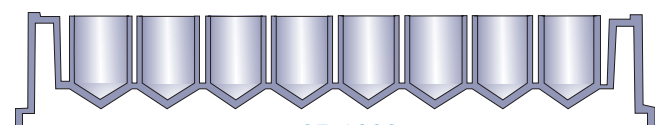
07-0067N



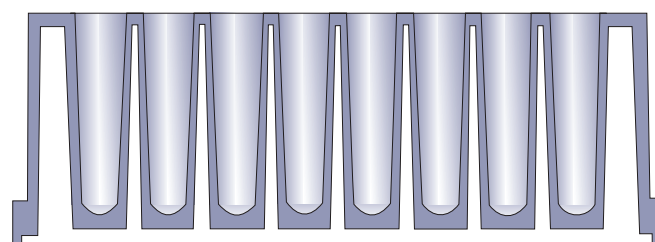
07-1000



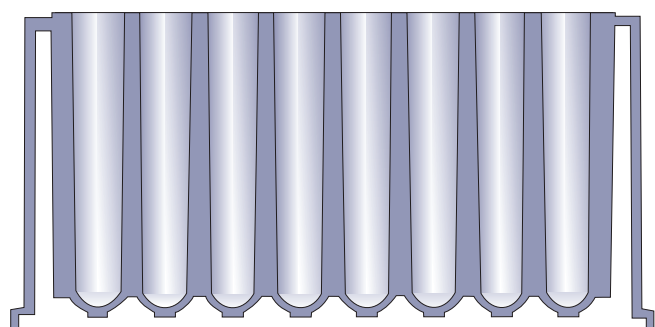
07-1100



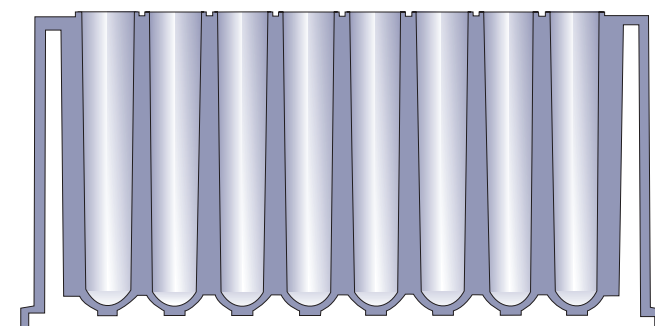
07-1200



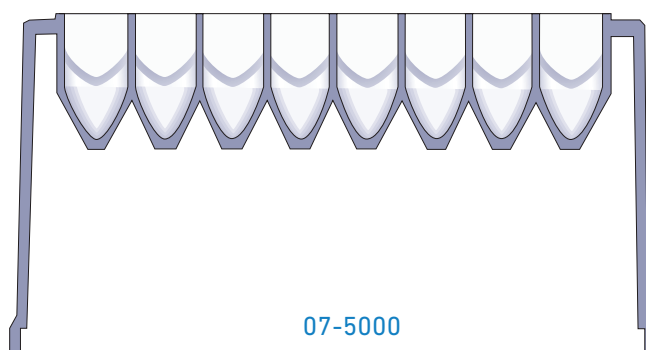
07-2000 & 07-2100



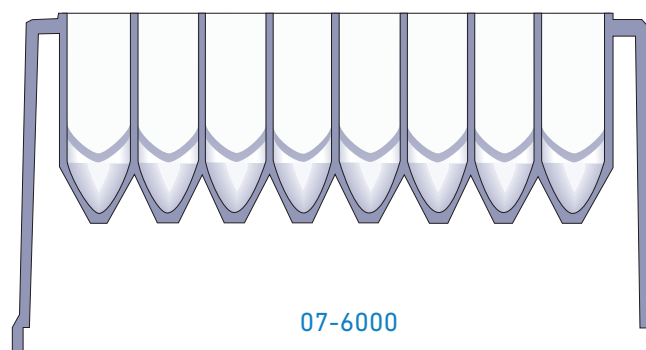
07-3000



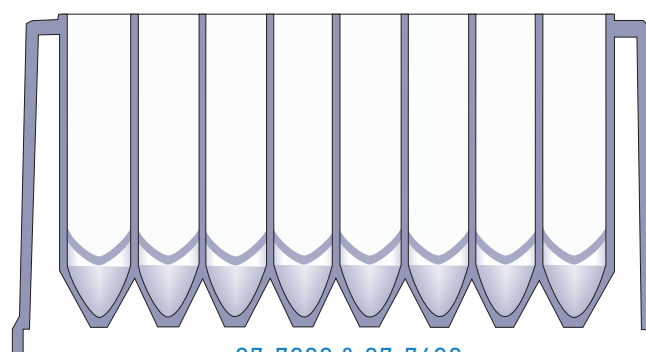
07-3900



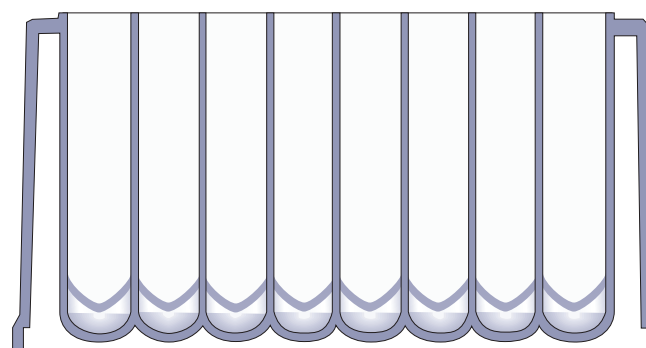
07-5000



07-6000



07-7000 & 07-7400



07-8000 & 07-8400





The Industry's Most Versatile Autosampler Vials

Not All Autosampler Vial Companies Are Created Equal

MicroLiter was founded in 1996 to supply autosampler vials and consumables for the industry's leading autosamplers. When deciding how to position our company within the multitude of other companies offering vials, we made a fundamental decision to only offer products that offered proven stable performance and avoid those products that had a wide range of tolerances that could impede performance of the autosampler.

We chose to develop products that met the requirements of the customers' demands but also format them in ways that allowed for more efficient transfer of samples from the prep lab to the autosampler. At the same time we also realized that the autosampler vials we offered hold the most expensive solutions produced by the lab. No matter how the sample was prepped, our autosampler vial was the last sample container your sample touched before it became a hazardous waste in the lab. We take this very seriously.

Class 10,000 Clean Room Packed Vials

MicroLiter's stringent cleaning of every autosampler vial that enters our facility makes certain that we provide you with a clean vial for your prepared sample.

Some of our competitors offer "Certified Vials." Could we offer them? Sure, but why? We believe that our competition introduced these vials to compete against our Class 10,000 Clean Room product line when they simply use the lot numbers provided by their vendor. To compete they randomly test a lot by LC / MS and charge you for doing so. That's not the case at MicroLiter. We clean every vial. We understand the specifications of the autosamplers we support. Consequently, the drawings we've developed to produce the vials we sell are more detailed than the base drawings of other companies. Upon delivery to our facility we receive the vials, check them against our drawings then clean them using our unique process and repackage them in a certified Class 10,000 Clean Room.

The Correct Closures & The Correct Packaging

Closures by their very nature can never be offered as a Class 10,000 Clean Room product unless we individually wrapped each cap with and without septum that we provide. What we offer is a means of delivery that has a user-friendly package that keeps the products clean during transportation to your lab. Once on site we then offer you a dispenser that our packaging integrates with that assists our customers in keeping the closures clean. We work to continually improve the packaging and offer our three inch tubes presealed on one end to reduce our handling of these items to a minimum. Each improvement reduces waste and contamination of the closures.

User-Beneficial Improvements Cost You No More

Unlike our competition, we do not charge you for the extra attention to cleanliness. In fact we take it one step forward by packaging closures in packs of 50 that can be stored in the supplies storeroom in your facility to keep them organized until you are ready to use them.

Our product numbers are frequently cross-referenced to other brands as equivalent. We believe this is unfortunate because there is a clear difference in packaging and manufacturing specifications.

Chromatography Vials, Caps & Inserts

- > 8mm Crimp Top Vials, Snaps Caps & Aluminum Seals27
- > 9mm & 76-Series Caps w/ Septa..... 18
- > 9mm & 76-Series Vials, 2.0mL, 12 x 32mm..... 16-19
- > 11mm Crimp Top Vials, 2.0mL, 12 x 32mm..... 20-23
- > 11mm Snap Cap Vials, 2.0mL, 12 x 32mm 24-26
- > 8-425 Screw Thread Vials, 2.0mL, 12 x 32mm..... 28-29
- > 10-425 Screw Thread Vials, 2.0mL, 12 x 32mm 28-29
- > AlumiTin™ 11mm Crimp Seals.....20, 22
- > Concentrator Vials.....32
- > Dispenser for Closures, Inserts & Filters..... 18, 23, 24
- > Headspace Autosampler Vials, Seals & Septa 30-31
- > Sample Vials..... 32-33
- > ScrewTin™ Headspace Vials & Caps30
- > SnapTin™ 11mm Snap Caps.....25





76-Series & 9mm Vials, 2.0mL, 12 x 32mm

Do Your Vials Ever Get Tossed on The Floor?



MicroLiter's 76-Series Vials™ for Agilent Autosamplers have a modified neck finish that assists in a consistent, repeatable seating of the gripper against the bottom of the cap. We believe that the current neck design allows for the arm to stop before the gripper is fully seated. The inconsistency of where the vial hangs allows it to rock once the arm begins the vial transfer. The vial can become

tilted at an angle that makes it impossible for the arm to place the vial, thus tossing it on the floor and causing an autosampler error and subsequent downtime. When the 76-Series Vial cap is properly applied, the autosampler transports the vial in a vertical position that assists in returning the vial to any position on the autosampler.



The 76-Series Vial™ (shown on left) features a modified neck design to reduce vial-related autosampler errors

The Industry's Most Versatile Autosampler Vial

This vial product line offers excellent performance on almost all autosamplers. Even though the 9mm vial was designed for Agilent 76-Series Auto Injectors, it has quickly gained acceptance throughout the industry.

Add to that our Class 10,000 Clean Room Packaging and you have a product that exceeds most OEM requirements for an autosampler vial! Cleaner vials offer users improved performance by eliminating almost all particulates. 9mm Screw

Thread Vials perform equal to 11mm Crimp Top Vials with the convenience and accessibility of screw thread vials. With a cap and special threads that match the shape of the 11mm crimp seal design, samplers that transport the vials using this crimp seal / neck configuration have new options.

MicroLiter's vials meet strict tolerances set for these vials to offer fluid performance on these instruments. Even septa specifications are more clearly defined to allow you to make a decision using the knowledge of the exact specification of the product you have purchased. No other vial supplier offers the chemist this much information.

Use 96-Well Extraction and Filtration Plates Then Transfer to 12 x 32mm Vials

If you are considering, or are using, 96 well extraction or filtration plates, elute your final sample into our μ Lplate® for 12 x 32mm vials, then transfer the inserts to any wide opening vial for final analysis.

Product Specifications

Vials

- Closure Requirement.....9mm Screw Thread Caps
- Glass, ClearClass 10,000 Clean, Type I, Borosilicate
- Glass, AmberClass 10,000 Clean, Type I, Borosilicate
- Natural and Brown Plastic.....Polypropylene (All)
- Silanization Type.....Vapor Phase Method

Inserts

- Glass, Clear.....Type I, Borosilicate
- Plastic, All100% Virgin Medical Grade Polypropylene
- Attached Springs.....Polyethylene
- Silanization Type.....Vapor Phase Method

Septa

- PTFE Disk.....0.010" PTFE
- FEP / Natural Rubber0.002" FEP / 0.037" Natural Rubber
- FEP / Butyl.....0.002" FEP / 0.037" Butyl
- ETFE / Burnt Red Silicone.....0.002" Clear ETFE / 0.037" Burnt Red Silicone
- PTFE / Silicone (Includes Pre-Cut)0.005" Red PTFE / 0.035" White Silicone or
0.005" Blue PTFE / 0.035" White Silicone
- PTFE / Silicone / PTFE.....0.005" Red PTFE / 0.030" White Silicone
0.005" Red PTFE

76-Series Vials™



Cat. No.	Approved for LC / GC	Description	Qty / Pack
76-1200*	Yes	Clear Vial w/ Marking Patch	100
76-1200-S	Yes	Silanized Clear Vial w/ Marking Patch	100
76-2200*	Yes	Amber Vial w/ Marking Patch	100
76-2200-S	Yes	Silanized Amber Vial w/ Marking Patch	100

* Class 10,000 Clean Room Packed Vials

76-Series Vials™ w/ Limited Volume Inserts



All inserts have 100µL of solution to give a visual reference for sample lift

Cat. No.	Description	Qty / Pack
76-1200-100	Clear Vial w/ Marking Patch w/ 11-0000-100 Insert	100
76-1200-101*	Clear Vial w/ Marking Patch w/ 11-0000-101 Insert	100
76-1200-300*	Clear Vial w/ Marking Patch w/ 11-0000-300 Insert	100
76-2200-101*	Amber Vial w/ Marking Patch w/ 11-0000-101 Insert	100
76-2200-300*	Amber Vial w/ Marking Patch w/ 11-0000-300 Insert	100

* Class 10,000 Clean Room Packed Vials

9mm Vials



Cat. No.	Approved for LC / GC	Description	Qty / Pack
09-1000*	Yes	Clear Vial	100
09-1000-S	Yes	Silanized Clear Vial	100
09-1200*	Yes	Clear Vial w/ Marking Patch	100
09-1200-S	Yes	Silanized Clear Vial w/ Marking Patch	100
09-1300-100	LC	300µL Polypropylene Vial	100
09-1300-1000	LC	1.0mL Polypropylene Vial	100
09-1400*	Yes	Clear Vial Conical Bottom	100
09-1400-S	Yes	Silanized Clear Vial Conical Bottom	100
09-2200*	Yes	Amber Vial w/ Marking Patch	100
09-2200-S	Yes	Silanized Amber Vial w/ Marking Patch	100
09-2300-1000	LC	1.0mL Amber Polypropylene Vial	100

* Class 10,000 Clean Room Packed Vials

9mm w/ Limited Volume Inserts



All inserts have 100µL of solution to give a visual reference for sample lift

Cat. No.	Description	Qty / Pack
09-1000-100	Clear Vial w/ 11-0000-100 Insert	100
09-1000-101*	Clear Vial w/ 11-0000-101 Insert	100
09-1000-140	Clear Vial w/ 11-0000-140 Insert	100
09-1000-300*	Clear Vial w/ 11-0000-300 Insert	100
09-1200-100	Clear Vial w/ Marking Patch w/ 11-0000-100 Insert	100
09-1200-101*	Clear Vial w/ Marking Patch w/ 11-0000-101 Insert	100
09-1200-300*	Clear Vial w/ Marking Patch w/ 11-0000-300 Insert	100
09-2200-101*	Amber Vial w/ Marking Patch w/ 11-0000-101 Insert	100
09-2200-300*	Amber Vial w/ Marking Patch w/ 11-0000-300 Insert	100

* Class 10,000 Clean Room Packed Vials



All inserts have 100µL of solution to give a visual reference for sample lift

Inserts

Cat. No.	Description	Qty / Pack
11-0000-100	300µL, Conical Mandrel Glass Insert w/ Attached Plastic Spring	100
11-0000-100-B	300µL, Conical Insert w/ Attached Spring, Bulk	1000
11-0000-100-S	Silanized 300µL, Conical Mandrel Glass Insert w/ Attached Plastic Spring	100
11-0000-101	350µL, Conical Pulled-Point Insert (No spring required)	100
11-0000-101-B	350µL, Conical Pulled-Point Insert, Bulk	1000
11-0000-101-S	Silanized 350µL, Conical Pulled-Point Insert	100
11-0000-140	300µL, Conical PP Insert w/ Attached Plastic Spring	100
11-0000-300	400µL, Flat Bottom Insert	100
11-0000-300-B	400µL, Flat Bottom Insert, Bulk	1000
11-0000-300-S	Silanized 400µL, Flat Bottom Insert	100

Vials with Limited Volume Inserts

It has been our long-standing belief that vials with too many tolerances are very risky to use. Making two parts and fusing them together creates too many points in the manufacturing process where errors can occur.



76-Series & 9mm Caps & Caps w/ Septa

Both product lines use the same cap. Simply choose the cap color and septum compatible with your method.



9mm Caps

Cat. No.	Color	Qty / Pack
09-0000B	Blue	100
09-0000G	Green	100
09-0000K	Black	100
09-0000N	Natural	100
09-0000R	Red	100
09-0000Y	Yellow	100

9mm Septa

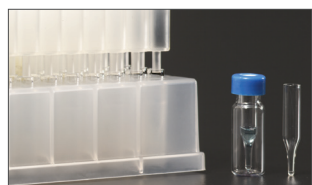
Cat. No.	Description	Qty / Pack
09-0010	PTFE Disk .010"	100
09-0020	FEP / Natural Rubber	100
09-0021	FEP / Butyl	100
09-0022	ETFE / Burnt Red Silicone	100
09-0030	PTFE / Silicone	100
09-0035	PTFE / Silicone, Pre-Cut	100
09-0040	PTFE / Silicone / PTFE	100

Caps w/ Septa Installed

Description	Qty / Pack	Blue	Green	Cat. No. Based on Cap Color			
				Black	Natural	Red	Yellow
ScrewTin™ Caps w/ Septa							
FEP / Natural Rubber	100	09-0020BT	09-0020GT	09-0020KT	09-0020NT	09-0020RT	09-0020YT
FEP / Butyl	100	—	—	—	09-0021NT	—	—
ETFE / Burnt Red Silicone	100	—	—	—	09-0022NT	—	—
PTFE / Silicone†	100	09-0030BT	09-0030GT	09-0030KT	09-0030NT	09-0030RT	09-0030YT
PTFE / Silicone†, Pre-Cut	100	—	—	—	09-0035NT	—	—
PTFE / Silicone / PTFE	100	09-0040BT	09-0040GT	09-0040KT	09-0040NT	09-0040RT	09-0040YT
Caps w/ FEP / Natural Rubber and FEP / Butyl Septa							
FEP / Natural Rubber	100	09-0020B	09-0020G	09-0020K	09-0020N	09-0020R	09-0020Y
FEP / Natural Rubber - Bulk Pail	2000	09-0020B-B	09-0020G-B	09-0020K-B	09-0020N-B	09-0020R-B	09-0020Y-B
FEP / Butyl	100	09-0021B	09-0021G	09-0021K	09-0021N	09-0021R	09-0021Y
FEP / Butyl - Bulk Pail	2000	09-0021B-B	09-0021G-B	09-0021K-B	09-0021N-B	09-0021R-B	09-0021Y-B
Caps w/ ETFE / Burnt Red Silicone							
ETFE / Burnt Red Silicone	100	09-0022B	09-0022G	09-0022K	09-0022N	09-0022R	09-0022Y
ETFE / Burnt Red Silicone - Bulk Pail	2000	09-0022B-B	09-0022G-B	09-0022K-B	09-0022N-B	09-0022R-B	09-0022Y-B
Caps w/ PTFE / Silicone							
PTFE / Silicone†	100	09-0030B	09-0030G	09-0030K	09-0030N	09-0030R	09-0030Y
PTFE / Silicone† - Bulk Pail	2000	09-0030B-B	09-0030G-B	09-0030K-B	09-0030N-B	09-0030R-B	09-0030Y-B
PTFE / Silicone†, Pre-Cut	100	09-0035B	09-0035G	09-0035K	09-0035N	09-0035R	09-0035Y
PTFE / Silicone†, Pre-Cut - Bulk Pail	2000	09-0035B-B	09-0035G-B	09-0035K-B	09-0035N-B	09-0035R-B	09-0035Y-B
Bonded PTFE / Silicone†, Pre-Cut	100	09-0036B	—	—	—	—	—
ILT LC-Clean™ Cap w/ PTFE / Silicone	100	09-0037B	—	—	—	—	—
ILT LC-Clean™ Cap w/ PTFE / Silicone, Pre-Cut	100	—	09-0037GR (Gray Cap)	—	—	—	—
Caps w/ PTFE / Silicone / PTFE							
PTFE / Silicone / PTFE	100	09-0040B	09-0040G	09-0040K	09-0040N	09-0040R	09-0040Y
PTFE / Silicone / PTFE - Bulk Pail	2000	09-0040B-B	09-0040G-B	09-0040K-B	09-0040N-B	09-0040R-B	09-0040Y-B
Caps w/ FKM							
FKM Septa	100	09-0080B	09-0080G	09-0080K	09-0080N	09-0080R	09-0080Y

† Post Baked to remove additional siloxanes

Use 96-Well Extraction and Filtration Microplates to Prep Your Samples, Then Transfer the Glass Inserts to 12 x 32mm Vials



If you are considering, or are using, 96-well extraction or filtration plates to prep your samples, elute your final sample into our μ Lplate® for 12 x 32mm vials, then transfer the inserts to any wide opening vial for final analysis. The convenience and 3-fold increases in efficiency can be realized by utilizing this method of development of samples. No longer are you bound to

bulky 12 and 24 position, column-based extraction apparatus.

μ Lplate® w/ Inserts for 12 x 32mm Vials

Cat. No.	Description	Qty / Pack
07-2000-200	96-Well μ Lplate w/ 350 μ L Inserts Installed	100



MicroLiter's Closure and Insert Tube Packs consider your operations well beyond delivery of our products. Our packaging retrofits into our dispensers for easy access and to keep closures and inserts clean after you've accessed the packs. Dispensers should be purchased to equip all workstations in the lab. Use a larger diameter tube for vials.

MicroLiter Dispenser

Cat. No.	Qty / Kit
00-DISP	Sold Individually w/ Adapter

76-Series Vials™

Component Kits*



Assembled Vials



		Cat. No. Based on Cap Color						Cat. No. Based on Cap Color					
Septa	Qty / Pack	Blue	Green	Black	Natural	Red	Yellow	Blue	Green	Black	Natural	Red	Yellow
76-1200 Clear 76-Series Vials w/ Marking Patch													
PTFE Disk	100	76-1210B	76-1210G	76-1210K	76-1210N	76-1210R	76-1210Y	76-1210B-A	76-1210G-A	76-1210K-A	76-1210N-A	76-1210R-A	76-1210Y-A
FEP / Natural Rubber	100	76-1220B	76-1220G	76-1220K	76-1220N	76-1220R	76-1220Y	76-1220B-A	76-1220G-A	76-1220K-A	76-1220N-A	76-1220R-A	76-1220Y-A
FEP / Butyl	100	76-1221B	76-1221G	76-1221K	76-1221N	76-1221R	76-1221Y	76-1221B-A	76-1221G-A	76-1221K-A	76-1221N-A	76-1221R-A	76-1221Y-A
ETFE / Burnt Red Silicone	100	76-1222B	76-1222G	76-1222K	76-1222N	76-1222R	76-1222Y	76-1222B-A	76-1222G-A	76-1222K-A	76-1222N-A	76-1222R-A	76-1222Y-A
PTFE / Silicone	100	76-1230B	76-1230G	76-1230K	76-1230N	76-1230R	76-1230Y	76-1230B-A	76-1230G-A	76-1230K-A	76-1230N-A	76-1230R-A	76-1230Y-A
PTFE / Silicone, Pre-Cut	100	76-1235B	76-1235G	76-1235K	76-1235N	76-1235R	76-1235Y	76-1235B-A	76-1235G-A	76-1235K-A	76-1235N-A	76-1235R-A	76-1235Y-A
PTFE / Silicone / PTFE	100	76-1240B	76-1240G	76-1240K	76-1240N	76-1240R	76-1240Y	76-1240B-A	76-1240G-A	76-1240K-A	76-1240N-A	76-1240R-A	76-1240Y-A
76-2200 Amber 76-Series Vials w/ Marking Patch													
PTFE Disk	100	76-2210B	76-2210G	76-2210K	76-2210N	76-2210R	76-2210Y	76-2210B-A	76-2210G-A	76-2210K-A	76-2210N-A	76-2210R-A	76-2210Y-A
FEP / Natural Rubber	100	76-2220B	76-2220G	76-2220K	76-2220N	76-2220R	76-2220Y	76-2220B-A	76-2220G-A	76-2220K-A	76-2220N-A	76-2220R-A	76-2220Y-A
FEP / Butyl	100	76-2221B	76-2221G	76-2221K	76-2221N	76-2221R	76-2221Y	76-2221B-A	76-2221G-A	76-2221K-A	76-2221N-A	76-2221R-A	76-2221Y-A
ETFE / Burnt Red Silicone	100	76-2222B	76-2222G	76-2222K	76-2222N	76-2222R	76-2222Y	76-2222B-A	76-2222G-A	76-2222K-A	76-2222N-A	76-2222R-A	76-2222Y-A
PTFE / Silicone	100	76-2230B	76-2230G	76-2230K	76-2230N	76-2230R	76-2230Y	76-2230B-A	76-2230G-A	76-2230K-A	76-2230N-A	76-2230R-A	76-2230Y-A
PTFE / Silicone, Pre-Cut	100	76-2235B	76-2235G	76-2235K	76-2235N	76-2235R	76-2235Y	76-2235B-A	76-2235G-A	76-2235K-A	76-2235N-A	76-2235R-A	76-2235Y-A
PTFE / Silicone / PTFE	100	76-2240B	76-2240G	76-2240K	76-2240N	76-2240R	76-2240Y	76-2240B-A	76-2240G-A	76-2240K-A	76-2240N-A	76-2240R-A	76-2240Y-A

9mm Vials

		Cat. No. Based on Cap Color						Cat. No. Based on Cap Color					
Septa	Qty / Pack	Blue	Green	Black	Natural	Red	Yellow	Blue	Green	Black	Natural	Red	Yellow
09-1000 Clear 09-Series Vials													
PTFE Disk	100	09-1010B	09-1010G	09-1010K	09-1010N	09-1010R	09-1010Y	09-1010B-A	09-1010G-A	09-1010K-A	09-1010N-A	09-1010R-A	09-1010Y-A
FEP / Natural Rubber	100	09-1020B	09-1020G	09-1020K	09-1020N	09-1020R	09-1020Y	09-1020B-A	09-1020G-A	09-1020K-A	09-1020N-A	09-1020R-A	09-1020Y-A
FEP / Butyl	100	09-1021B	09-1021G	09-1021K	09-1021N	09-1021R	09-1021Y	09-1021B-A	09-1021G-A	09-1021K-A	09-1021N-A	09-1021R-A	09-1021Y-A
ETFE / Burnt Red Silicone	100	09-1022B	09-1022G	09-1022K	09-1022N	09-1022R	09-1022Y	09-1022B-A	09-1022G-A	09-1022K-A	09-1022N-A	09-1022R-A	09-1022Y-A
PTFE / Silicone	100	09-1030B	09-1030G	09-1030K	09-1030N	09-1030R	09-1030Y	09-1030B-A	09-1030G-A	09-1030K-A	09-1030N-A	09-1030R-A	09-1030Y-A
PTFE / Silicone, Pre-Cut	100	09-1035B	09-1035G	09-1035K	09-1035N	09-1035R	09-1035Y	09-1035B-A	09-1035G-A	09-1035K-A	09-1035N-A	09-1035R-A	09-1035Y-A
PTFE / Silicone, Bonded, Cut	100	09-1036B	—	—	—	—	—	09-1036B-A	—	—	—	—	—
PTFE / Silicone / PTFE	100	09-1040B	09-1040G	09-1040K	09-1040N	09-1040R	09-1040Y	09-1040B-A	09-1040G-A	09-1040K-A	09-1040N-A	09-1040R-A	09-1040Y-A
09-1200 Clear 09-Series Vials w/ Marking Patch													
PTFE Disk	100	09-1210B	09-1210G	09-1210K	09-1210N	09-1210R	09-1210Y	09-1210B-A	09-1210G-A	09-1210K-A	09-1210N-A	09-1210R-A	09-1210Y-A
FEP / Natural Rubber	100	09-1220B	09-1220G	09-1220K	09-1220N	09-1220R	09-1220Y	09-1220B-A	09-1220G-A	09-1220K-A	09-1220N-A	09-1220R-A	09-1220Y-A
FEP / Butyl	100	09-1221B	09-1221G	09-1221K	09-1221N	09-1221R	09-1221Y	09-1221B-A	09-1221G-A	09-1221K-A	09-1221N-A	09-1221R-A	09-1221Y-A
ETFE / Burnt Red Silicone	100	09-1222B	09-1222G	09-1222K	09-1222N	09-1222R	09-1222Y	09-1222B-A	09-1222G-A	09-1222K-A	09-1222N-A	09-1222R-A	09-1222Y-A
PTFE / Silicone	100	09-1230B	09-1230G	09-1230K	09-1230N	09-1230R	09-1230Y	09-1230B-A	09-1230G-A	09-1230K-A	09-1230N-A	09-1230R-A	09-1230Y-A
PTFE / Silicone, Pre-Cut	100	09-1235B	09-1235G	09-1235K	09-1235N	09-1235R	09-1235Y	09-1235B-A	09-1235G-A	09-1235K-A	09-1235N-A	09-1235R-A	09-1235Y-A
PTFE / Silicone, Bonded, Cut	100	09-1236B	—	—	—	—	—	09-1236B-A	—	—	—	—	—
PTFE / Silicone / PTFE	100	09-1240B	09-1240G	09-1240K	09-1240N	09-1240R	09-1240Y	09-1240B-A	09-1240G-A	09-1240K-A	09-1240N-A	09-1240R-A	09-1240Y-A
09-2200 Amber 09-Series Vials w/ Marking Patch													
PTFE Disk	100	09-2210B	09-2210G	09-2210K	09-2210N	09-2210R	09-2210Y	09-2210B-A	09-2210G-A	09-2210K-A	09-2210N-A	09-2210R-A	09-2210Y-A
FEP / Natural Rubber	100	09-2220B	09-2220G	09-2220K	09-2220N	09-2220R	09-2220Y	09-2220B-A	09-2220G-A	09-2220K-A	09-2220N-A	09-2220R-A	09-2220Y-A
FEP / Butyl	100	09-2221B	09-2221G	09-2221K	09-2221N	09-2221R	09-2221Y	09-2221B-A	09-2221G-A	09-2221K-A	09-2221N-A	09-2221R-A	09-2221Y-A
ETFE / Burnt Red Silicone	100	09-2222B	09-2222G	09-2222K	09-2222N	09-2222R	09-2222Y	09-2222B-A	09-2222G-A	09-2222K-A	09-2222N-A	09-2222R-A	09-2222Y-A
PTFE / Silicone	100	09-2230B	09-2230G	09-2230K	09-2230N	09-2230R	09-2230Y	09-2230B-A	09-2230G-A	09-2230K-A	09-2230N-A	09-2230R-A	09-2230Y-A
PTFE / Silicone, Pre-Cut	100	09-2235B	09-2235G	09-2235K	09-2235N	09-2235R	09-2235Y	09-2235B-A	09-2235G-A	09-2235K-A	09-2235N-A	09-2235R-A	09-2235Y-A
PTFE / Silicone, Bonded, Cut	100	09-2236B	—	—	—	—	—	09-2236B-A	—	—	—	—	—
PTFE / Silicone / PTFE	100	09-2240B	09-2240G	09-2240K	09-2240N	09-2240R	09-2240Y	09-2240B-A	09-2240G-A	09-2240K-A	09-2240N-A	09-2240R-A	09-2240Y-A

* Class 10,000 Clean Room Packed Vials



Crimp Top Vials, 2.0mL, 12 x 32mm

More Than Just a Particulate-Free Package

MicroLiter understands that you must have truly clean vials without particulates to maintain sample integrity. To simply package the vials in a nice thermoformed pack doesn't necessarily mean the vials are free of particulates. MicroLiter doesn't assume any vial is clean when it enters our facility. We take the extra step of cleaning our vials, then sealing them in a Class 10,000 Clean Room atmosphere at no extra charge.

The Nation's Best Prices and Best Quality Inserts



Check out the unbelievable prices we offer on inserts. Everything from inserts with plastic springs, to pulled-point economy grade and inserts with flat bottoms. MicroLiter's glass inserts have been sized to the inside diameter of the vial neck, forcing the insert to stay vertical in the vial and offer the maximum opening of any insert on the market.

Our pulled-point inserts are more consistent performers than inserts with springs because blunt-point syringe needles sometimes seal against the bottom of the insert and fail to withdraw a sample. These pulled-point inserts are manufactured so that the needle will never seal against the insert. For samples that have even slightly larger volumes than the injection volume there is no need to incur the extra expense of an insert with a spring. If you only have the injection volume in the insert, use the 11-0000-100 mandrel point insert with plastic spring.

Save Money by Allowing Us to Assemble Your Vials

The *ACS Comprehensive Salary and Employment Survey 2008*, American Chemical Society: Washington, DC, 2008 states that the average salary of a B.S. Chemist with four years' experience is \$72,600. To install 100 inserts into 100 vials takes a minimum of 8 minutes and costs your company approximately \$4.65 per pack. MicroLiter can help you recover some of this cost by allowing us to take the menial task of assembling these items away from your chemists. If you calculate the number of vials you use a year, the savings and productivity gains can be significant to your organization.



11mm AlumiTin™ Seals

Available in all of the popular septa configurations, these seals can be used on any application where CTC Analytics PAL® instruments must transport the vial to another location using the magnets found on these instruments.

Product Specifications

Vials

- Closure Requirement.....11mm Crimp Top Seal
- Glass, ClearClass 10,000 Clean, Type I, Borosilicate
- Glass, AmberClass 10,000 Clean, Type I, Borosilicate

Inserts

- Glass, ClearType I, Borosilicate
- Plastic, All.....100% Virgin Medical Grade Polypropylene
- Attached Springs.....Polyethylene

Septa

- 11-0020 Series 0.002" Clear FEP PTFE / 0.037" Burnt Red Natural Rubber
- 11-0021 Series 0.002" Clear FEP PTFE / 0.037" Burnt Red Poly Isoprene Butyl
- 11-0022 Series 0.002" Clear ETFE PTFE / 0.037" Burnt Red Silicone
- 11-0030 Series 0.005" Red PTFE / 0.035" White Silicone
- 11-0040 Series 0.005" Red PTFE / 0.030" White Silicone / 0.005" Red PTFE
- 11-0060 Series 0.005" Red PTFE / 0.055" White Silicone

Visual reference for the following products can be found using the group photos. All products are aligned in the same order as the product numbers listed below. Bulk Packs and Silanized Inserts are not represented in the photo.

Vials, 12 x 32mm, 11mm Crimp Seal



Conical-polypropylene vials and μ Lvials® have 100 μ L of solutions to give a visual reference of sample lift

Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-1000*	Yes	2.0mL Clear Vial	100
11-1000-S	Yes	Silanized 2.0mL Clear Vial	100
11-1200*	Yes	2.0mL Clear Vial w/ Marking Patch	100
11-1200-S	Yes	Silanized 2.0mL Clear Vial w/ Marking Patch	100
11-1400*	Yes	1.8mL μ Lvial®, Clear	100
11-1400-S	Yes	Silanized 1.8mL μ Lvial, Clear	100
11-1500*	Yes	1.8mL μ Lvial, Clear w/ Marking Patch	100
11-1500-S	Yes	Silanized 1.8mL μ Lvial, Clear w/ Marking Patch	100
11-2200*	Yes	2.0mL Amber Vial w/ Marking Patch	100
11-2200-S	Yes	Silanized 2.0mL Amber Vial w/ Marking Patch	100
11-5300-100	LC Only	300 μ L, Conical Polypropylene	100
11-5300-500	LC Only	500 μ L, Conical Polypropylene	100
11-5300-700	LC Only	900 μ L, V-Bottom Polypropylene	100

* Class 10,000 Clean Room Packed Vials



All inserts have 100 μ L of solution to give a visual reference for sample lift

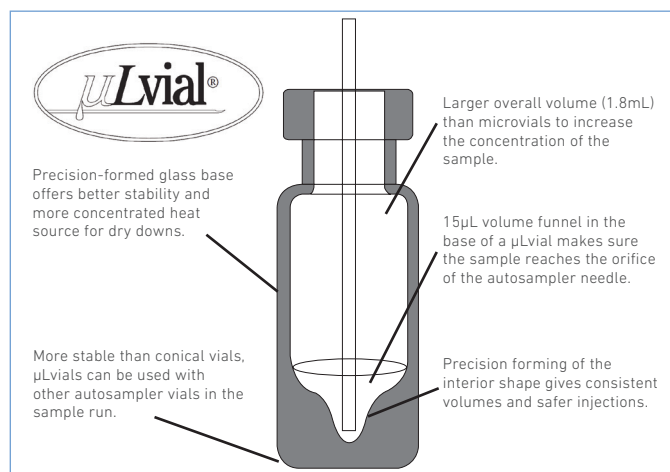
Vials with Limited Volume Inserts



All inserts have 100 μ L of solution to give a visual reference for sample lift

Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-1000-100	Yes	Clear Vial w/ 11-0000-100 Insert	100
11-1000-101*	Yes	Clear Vial w/ 11-0000-101 Insert	100
11-1200-101*	Yes	Clear Vial w/ Marking Patch w/ 11-0000-101 Insert	100
11-2200-101*	Yes	Amber Vial w/ Marking Patch w/ 11-0000-101 Insert	100
11-2200-140	Yes	Amber Vial w/ Marking Patch w/ 11-0000-140 Insert	100
11-1000-300*	Yes	Clear Vial w/ 11-0000-300 Insert	100
11-1200-300*	Yes	Clear Vial w/ Marking Patch w/ 11-0000-300 Insert	100
11-2200-300*	Yes	Amber Vial w/ Marking Patch w/ 11-0000-300 Insert	100

* Class 10,000 Clean Room Packed Vials

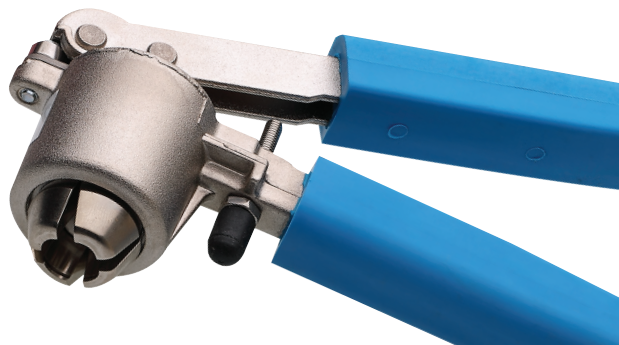


Limited Volume Inserts for 12 x 32mm Vials

Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-0000-100	Yes	300 μ L, Conical Mandrel Glass Insert w/ Plastic Spring	100
11-0000-100-B	Yes	300 μ L, Conical Mandrel Glass Insert w/ Plastic Spring, Bulk	1000
11-0000-100-S	Yes	Silanized 300 μ L, Conical Mandrel Glass Insert w/ Spring	100
11-0000-101	Yes	350 μ L, Conical Pulled-Point Insert (No Spring Required)	100
11-0000-101-B	Yes	350 μ L, Conical Pulled-Point Insert (No Spring Required), Bulk	1000
11-0000-101-S	Yes	Silanized 350 μ L, Conical Pulled-Point Insert	100
11-0000-140	Yes	300 μ L, Conical Polypropylene Insert w/ Plastic Spring	100
11-0000-300	Yes	400 μ L, Flat Bottom Insert	100
11-0000-300-B	Yes	400 μ L, Flat Bottom Insert, Bulk	1000
11-0000-300-S	Yes	Silanized 400 μ L, Flat Bottom Insert	100

Find Our New Crimpers & Decappers on DWK-LifeSciences.com

- Cushioned ergonomic handle reduces hand fatigue
- Labeled for quick size identification
- Polished crimping jaws provide consistent sealing





11mm Aluminum Crimp Seals for 12 x 32mm Vials

MicroLiter understands the autosampler vial and septum's relationship with the prepared sample and the analytical instrument. The last thing anyone wants is a contaminant or crash that is traced back to the consumable. MicroLiter offers the right products for all instrument platforms and can work with you to determine the best solution for your particular sample.

MicroLiter makes a big effort to help you maintain a consistent product lot to lot, year after year. Our packaging assists you in quick visual reference for identification of septum specification. The packs also mate with a handy dispenser for closed container storage after opening.

MicroLiter Defines PTFE / Red Rubber Septa



Can you tell the difference? Your GC can. Use this guide to maximize the quality of your chromatography!

Red Rubber is the most commonly misused term with regard to septa manufacturing. Every chromatography consumables supplier sells PTFE / Red Rubber. All are low priced. All are sold in high quantities. Almost all are different formulations. Until recently, MicroLiter sold a variety of formulations under one product number. Because the instruments have advanced since the introduction of these products, and the demand for consistency is on the rise, we thought it might be useful to define the various forms and change slightly the way we sell it.

Red Rubber originally was a thin layer of FEP and a relatively thick layer of Natural Rubber. This material was plentiful in the pharmaceutical industry and its low cost made it the industry standard material for gas chromatography. Polybutyl Isoprene, manufactured as a synthetic alternative to Natural Rubber, is also a popular formulation.

Because cost was the primary decision for specifying Red Rubber, Silicone manufacturers entered the red rubber market with their version of PTFE / Red Rubber. A specification of FEP-backed or ETFE-backed Burnt Red Silicone provided the lower material costs necessary to compete with the Butyl and rubber materials. Overall, Silicone manufacturers have brought about a more competitive market, benefiting those who purchase mainly on price.

The only issue related to these products stems from those customers who use Butyl or Natural Rubber because Silicone interferes with their chromatograms. Cost is not the issue with this group of customers.

A Variety of Product Numbers for PTFE / Red Rubber

To eliminate any confusion MicroLiter now offers, depending on the product line, a variety of different PTFE / Red Rubber specifications so that you can consistently order the same material.

You will see these listings in each product line, listed first as PTFE / Red Rubber, then as the product number series that matches the material specs. Our customer service representatives can assist you in selecting the correct formulation. If you desire, we will send you enough samples so that you can make a quantifiable decision.

11mm Crimp Seals

Cat. No.	Approved for LC / GC	Description	Qty / Pack
PTFE / Red Rubber			
11-0020A	GC Only	Aluminum w/ FEP / Natural Rubber	100
11-0020A-B	GC Only	Aluminum w/ FEP / Natural Rubber - Bulk	2000
11-0020AT	GC Only	AlumiTin™ w/ FEP / Natural Rubber	100
11-0020B	GC Only	Blue Seal w/ FEP / Natural Rubber	100
11-0020BT	GC Only	Blue AlumiTin w/ FEP / Natural Rubber	100
11-0020G	GC Only	Green Seal w/ FEP / Natural Rubber	100
11-0020GT	GC Only	Green AlumiTin w/ FEP / Natural Rubber	100
11-0020R	GC Only	Red Seal w/ FEP / Natural Rubber	100
11-0020RT	GC Only	Red AlumiTin w/ FEP / Natural Rubber	100
11-0020Y	GC Only	Yellow Seal w/ FEP / Natural Rubber	100
11-0020YT	GC Only	Yellow AlumiTin w/ FEP / Natural Rubber	100

11-0021A	GC Only	Aluminum w/ FEP / Butyl	100
11-0021A-B	GC Only	Aluminum w/ FEP / Butyl - Bulk	2000
11-0021AT	GC Only	AlumiTin w/ FEP / Butyl	100
11-0021B	GC Only	Blue Seal w/ FEP / Butyl	100
11-0021BT	GC Only	Blue AlumiTin w/ FEP / Butyl	100
11-0021G	GC Only	Green Seal w/ FEP / Butyl	100
11-0021GT	GC Only	Green AlumiTin w/ FEP / Butyl	100
11-0021R	GC Only	Red Seal w/ FEP / Butyl	100
11-0021RT	GC Only	Red AlumiTin w/ FEP / Butyl	100
11-0021Y	GC Only	Yellow Seal w/ FEP / Butyl	100
11-0021YT	GC Only	Yellow AlumiTin w/ FEP / Butyl	100

11-0022A	GC Only	Aluminum w/ ETFE / Burnt Red Silicone	100
11-0022A-B	GC Only	Aluminum w/ ETFE / Burnt Red Silicone - Bulk	2000
11-0022AT	GC Only	AlumiTin w/ ETFE / Burnt Red Silicone	100
11-0022B	GC Only	Blue Seal w/ ETFE / Burnt Red Silicone	100
11-0022BT	GC Only	Blue AlumiTin w/ ETFE / Burnt Red Silicone	100
11-0022G	GC Only	Green Seal w/ ETFE / Burnt Red Silicone	100
11-0022GT	GC Only	Green AlumiTin w/ ETFE / Burnt Red Silicone	100
11-0022R	GC Only	Red Seal w/ ETFE / Burnt Red Silicone	100
11-0022RT	GC Only	Red AlumiTin w/ ETFE / Burnt Red Silicone	100
11-0022Y	GC Only	Yellow Seal w/ ETFE / Burnt Red Silicone	100
11-0022YT	GC Only	Yellow AlumiTin w/ ETFE / Burnt Red Silicone	100

PTFE / Silicone / PTFE and PTFE / Silicone

11-0030A	GC Only	Aluminum w/ PTFE / Silicone, 0.040"	100
11-0030A-B	GC Only	Aluminum w/ PTFE / Silicone, 0.040" - Bulk	2000
11-0030AT	GC Only	AlumiTin w/ PTFE / Silicone, 0.040"	100
11-0030M	GC Only	Magnetic Seal w/ PTFE / Silicone, 0.040"	100
11-0040A	Yes	Aluminum w/ PTFE / Silicone / PTFE	100
11-0040A-B	Yes	Aluminum w/ PTFE / Silicone / PTFE - Bulk	2000
11-0040AT	Yes	AlumiTin w/ PTFE / Silicone / PTFE	100
11-0040M	Yes	Magnetic Seal w/ PTFE / Silicone / PTFE	100
11-0060A	GC Only	Aluminum w/ PTFE / Silicone, 0.060"	100

Component Kits



Component Kits offer easy visual reference of the items included in each kit. Crimp Seal tubes have caps that are color-coded to identify the septa installed in the crimp seals.

Cat. No.	Approved for LC / GC	Vial	Crimp Seal	Qty / Pack
11-1020A*	GC Only	Clear Vial	11-0020A, FEP / Natural Rubber	100
11-1021A*	GC Only	Clear Vial	11-0021A, FEP / Butyl	100
11-1022A*	GC Only	Clear Vial	11-0022A, ETFE / Silicone	100
11-1030A*	GC Only	Clear Vial	11-0030A, PTFE / Silicone	100
11-1030AT*	GC Only	Clear Vial	11-0030AT, PTFE / Silicone AlumiTin™	100
11-1040A*	Yes	Clear Vial	11-0040A, PTFE / Silicone / PTFE	100
11-1040AT*	Yes	Clear Vial	11-0040AT, PTFE / Silicone / PTFE AlumiTin	100
11-1060A*	GC Only	Clear Vial	11-0060A, PTFE / Silicone	100
11-1220A*	GC Only	Clear Vial w/ Marking Patch	11-0020A, FEP / Natural Rubber	100
11-1220AT*	GC Only	Clear Vial w/ Marking Patch	11-0020AT, FEP / Natural Rubber AlumiTin	100
11-1221A*	GC Only	Clear Vial w/ Marking Patch	11-0021A, FEP / Butyl	100
11-1222A*	GC Only	Clear Vial w/ Marking Patch	11-0022A, ETFE / Silicone	100
11-1230A*	GC Only	Clear Vial w/ Marking Patch	11-0030A, PTFE / Silicone	100
11-1230AT*	GC Only	Clear Vial w/ Marking Patch	11-0030AT, PTFE / Silicone AlumiTin	100
11-1240A*	Yes	Clear Vial w/ Marking Patch	11-0040A, PTFE / Silicone / PTFE	100
11-1240AT*	Yes	Clear Vial w/ Marking Patch	11-0040AT, PTFE / Silicone / PTFE AlumiTin	100
11-1260A*	GC Only	Clear Vial w/ Marking Patch	11-0060A, PTFE / Silicone	100
11-1420A*	GC Only	Clear μ Lvial*	11-0020A, FEP / Natural Rubber	100
11-1420AT*	GC Only	Clear μ Lvial	11-0020AT, FEP / Natural Rubber AlumiTin	100
11-1421A*	GC Only	Clear μ Lvial	11-0021A, FEP / Butyl	100
11-1422A*	GC Only	Clear μ Lvial	11-0022A, ETFE / Silicone	100
11-1430A*	GC Only	Clear μ Lvial	11-0030A, PTFE / Silicone	100
11-1430AT*	GC Only	Clear μ Lvial	11-0030AT, PTFE / Silicone AlumiTin	100
11-1440A*	Yes	Clear μ Lvial	11-0040A, PTFE / Silicone / PTFE	100
11-1440AT*	Yes	Clear μ Lvial	11-0040AT, PTFE / Silicone / PTFE AlumiTin	100
11-1460A*	GC Only	Clear μ Lvial	11-0060A, PTFE / Silicone	100
11-1520A*	GC Only	Clear μ Lvial w/ Marking Patch	11-0020A, FEP / Natural Rubber	100
11-1520AT*	GC Only	Clear μ Lvial w/ Marking Patch	11-0020AT, FEP / Natural Rubber AlumiTin	100
11-1521A*	GC Only	Clear μ Lvial w/ Marking Patch	11-0021A, FEP / Butyl	100
11-1522A*	GC only	Clear μ Lvial w/ Marking Patch	11-0022A, ETFE / Silicone	100
11-1530A*	GC only	Clear μ Lvial w/ Marking Patch	11-0030A, PTFE / Silicone	100
11-1530AT*	GC only	Clear μ Lvial w/ Marking Patch	11-0030AT, PTFE / Silicone AlumiTin	100
11-1540A*	Yes	Clear μ Lvial w/ Marking Patch	11-0040A, PTFE / Silicone / PTFE	100
11-1540AT*	Yes	Clear μ Lvial w/ Marking Patch	11-0040AT, PTFE / Silicone / PTFE AlumiTin	100
11-1560A*	GC Only	Clear μ Lvial w/ Marking Patch	11-0060A, PTFE / Silicone	100

Cat. No.	Approved for LC / GC	Vial	Crimp Seal	Qty / Pack
11-2220A*	GC Only	Amber Vial w/ Marking Patch	11-0020A, FEP / Natural Rubber	100
11-2220AT*	GC Only	Amber Vial w/ Marking Patch	11-0020AT, FEP / Natural Rubber AlumiTin	100
11-2221A*	GC Only	Amber Vial w/ Marking Patch	11-0021A, FEP / Butyl	100
11-2222A*	GC Only	Amber Vial w/ Marking Patch	11-0022A, ETFE / Silicone	100
11-2230A*	GC Only	Amber Vial w/ Marking Patch	11-0030A, PTFE / Silicone	100
11-2230AT*	GC Only	Amber Vial w/ Marking Patch	11-0030AT, PTFE / Silicone AlumiTin	100
11-2240A*	Yes	Amber Vial w/ Marking Patch	11-0040A, PTFE / Silicone / PTFE	100
11-2240AT*	Yes	Amber Vial w/ Marking Patch	11-0040AT, PTFE / Silicone / PTFE AlumiTin	100
11-2260A*	GC Only	Amber Vial w/ Marking Patch	11-0060A, PTFE / Silicone	100

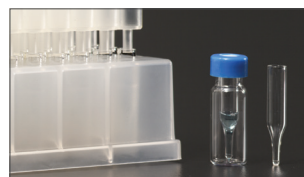
*Class 10,000 Clean Room Packed Vials

11mm Crimpers & Decrimpers

Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-0000-C	Yes	Crimper for 11mm Vials	1
11-0000-D	Yes	Decrimper for 11mm Vials	1

Vial Racks

Cat. No.	Approved for LC / GC	Description	Qty / Pack
12-0000-54	N/A	PAL* Vial Rack w/ Microplate Footprint, 54 Vials	1
12-0000-R50B	N/A	50 position Vial Rack Blue	1



If you are using 96-well extraction or filtration plates to prep your samples, elute your final sample into our μ Lplate* for 12 x 32mm vials, then transfer the inserts to any wide opening vial for final analysis.

 μ Lplate* w/ Inserts for 12 x 32mm Vials

Cat. No.	Approved for LC / GC	Description	Qty / Pack
07-2000-200	Yes	96-Well μ Lplate w/ 350 μ L Inserts	100



Use the large volume adapter to keep your vials clean after opening the pack. Polypropylene vials are shipped in the tubes.

Dispensers are shipped with both small and large tube adapters. Additional Dispensers can be purchased to equip all workstations in the lab.

MicroLiter Dispenser

Cat. No.	Qty / Kit
00-DISP	Sold Individually w/ Adapter



Snap Cap Vials, 2.0mL, 12 x 32mm

Color-Coded Caps Now Available

Snap Caps and SnapTins™ are now available in six colors. Snap Cap vials are an excellent choice if convenience and ease-of-use are important. Snap Cap closures have proven themselves to be an excellent alternative in HPLC because less volatile samples or high throughput labs benefit from the time saved over crimp top and screw thread vials.

The septa material used in these caps are the right products for the instruments you use. Purchase the components separately or as a component kit with 100 vials and 100 Snap Cap closures with septa.

MicroLiter has taken the extra step to clarify the confusion of exactly what it means when we say PTFE / Red Rubber. Please refer to the explanation found on pg. 22 of this brochure so that you know in advance the various materials used in your application.

SnapTin™ Caps for CTC Analytics Combi PAL®



MicroLiter leads the way for complete consumables solutions for CTC Analytics Combi PAL® Sample Handlers. If you are considering bar code applications or special handling where you must move the vial from one position on the PAL® System to another, use our snap cap with the metal ring installed.

If your sample is heavy MicroLiter offers a needle guide that intensifies magnetic force. See SnapTin™ listings.

Also available in 9mm screw threads and 11 & 20mm crimp

Product Specifications

Vials

- Closure Requirement.....11mm Snap Caps or 11mm Crimp Top Seal
- Glass, ClearClass 10,000 Clean, Type I, Borosilicate
- Glass, AmberClass 10,000 Clean, Type I, Borosilicate
- Plastic, All.....100% Virgin Medical Grade Polypropylene
- Silanization TypeVapor Phase Method

Inserts

- Glass, ClearType I, Borosilicate
- Plastic, All.....100% Virgin Medical Grade Polypropylene
- Attached Springs.....Polyethylene
- Silanization TypeVapor Phase Method

Septa

- PTFE Disk0.010" PTFE
- FEP / Butyl0.002" Clear FEP / 0.035" Burnt Red Butyl
- PTFE / Silicone0.005" Red PTFE / 0.035" White Silicone
- PTFE / Silicone, Pre-Cut.....0.005" Blue PTFE / 0.035" White Silicone
- PTFE / Silicone, Starburst, Pre-Cut
0.005" Yellow PTFE / 0.035" White Silicone
- PTFE / Silicone / PTFE0.005" Red PTFE / 0.030" White Silicone /
0.005" Red PTFE

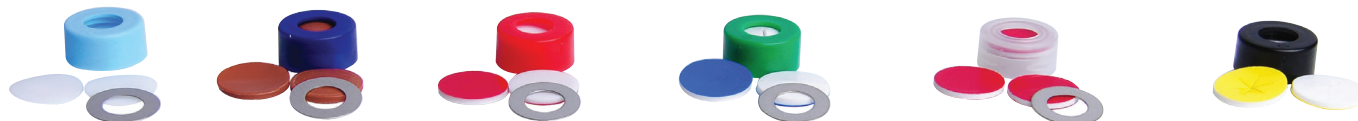


Dispensers are shipped with both small and large tube adapters. Use the large volume adapter to keep your vials clean after opening the pack. All Polypropylene vials are shipped in tubes. Tube packaging is color-coded for easy identification of septa.

MicroLiter Dispenser

Cat. No.	Qty / Kit
00-DISP	Sold Individually w/ Adapter

Snap Caps w/ Septa



Septa	With SnapTin™ Metallic O-Ring	Approved for LC / GC	Qty / Pack	Light Blue	Dark Blue	Green	Cat. No. by Cap Color Black	Natural	Red
PTFE Disk	No	LC Only	100	11-0051B	11-0051DB	11-0051G	11-0051K	11-0051N	11-0051R
PTFE Disk - Bulk Pail	No	LC Only	2000	11-0051B-B	11-0051DB-B	11-0051G-B	11-0051K-B	11-0051N-B	11-0051R-B
PTFE Disk	Yes	LC Only	100	11-0051BT	11-0051DBT	11-0051GT	11-0051KT	11-0051NT	11-0051RT
FEP / Butyl	No	GC Only	100	11-0052B	11-0052DB	11-0052G	11-0052K	11-0052N	11-0052R
FEP / Butyl - Bulk Pail	No	GC Only	2000	11-0052B-B	11-0052DB-B	11-0052G-B	11-0052K-B	11-0052N-B	11-0052R-B
FEP / Butyl	Yes	GC Only	100	11-0052BT	11-0052DBT	11-0052GT	11-0052KT	11-0052NT	11-0052RT
PTFE / Silicone	No	GC Only	100	11-0053B	11-0053DB	11-0053G	11-0053K	11-0053N	11-0053R
PTFE / Silicone - Bulk Pail	No	GC Only	2000	11-0053B-B	11-0053DB-B	11-0053G-B	11-0053K-B	11-0053N-B	11-0053R-B
PTFE / Silicone	Yes	GC Only	100	11-0053BT	11-0053DBT	11-0053GT	11-0053KT	11-0053NT	11-0053RT
PTFE / Silicone, Pre-Cut	No	LC Only	100	11-0054B	11-0054DB	11-0054G	11-0054K	11-0054N	11-0054R
PTFE / Silicone, Pre-Cut - Bulk Pail	No	LC Only	2000	11-0054B-B	11-0054DB-B	11-0054G-B	11-0054K-B	11-0054N-B	11-0054R-B
PTFE / Silicone, Pre-Cut	Yes	LC Only	100	11-0054BT	11-0054DBT	11-0054GT	11-0054KT	11-0054NT	11-0054RT
PTFE / Silicone / PTFE	No	Yes	100	11-0055B	11-0055DB	11-0055G	11-0055K	11-0055N	11-0055R
PTFE / Silicone / PTFE- Bulk Pail	No	Yes	2000	11-0055B-B	11-0055DB-B	11-0055G-B	11-0055K-B	11-0055N-B	11-0055R-B
PTFE / Silicone / PTFE	Yes	Yes	100	11-0055BT	11-0055DBT	11-0055GT	11-0055KT	11-0055NT	11-0055RT
PTFE / Silicone, Starburst, Pre-Cut	No	Prep & LC Only	100	11-0056B	11-0056DB	11-0056G	11-0056K	11-0056N	11-0056R

Vials



Inserts have 100µL of solution to give a visual reference of sample lift.

Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-5000*	Yes	2.0mL Clear	100
11-5000-S	Yes	Silanized 2.0mL Clear	100
11-5200*	Yes	2.0mL Clear w/ Marking Patch	100
11-5200-S	Yes	Silanized 2.0mL Clear w/ Marking Patch	100
11-5300-100	LC Only	300µL, Conical Polypropylene	100
11-5300-100-B	LC Only	300µL, Conical Polypropylene, Bulk	1000
11-5300-500	LC Only	500µL, Conical Polypropylene	100
11-5300-500-B	LC Only	500µL, Conical Polypropylene, Bulk	1000
11-5300-700	LC Only	900µL, V-Bottom Polypropylene	100
11-5300-700-B	LC Only	900µL, V-Bottom Polypropylene, Bulk	1000
11-6200*	Yes	2.0mL Amber w/ Marking Patch	100
11-6200-S	Yes	Silanized 2.0mL Amber w/ Marking Patch	100

*Class 10,000 Clean Room Packed Vials

Vials w/ Inserts Installed



Inserts have 100µL of solution to give a visual reference of sample lift.
Silanization is available for all glass inserts

Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-5000-101*	Yes	2.0mL Clear Vial w/ 11-0000-101 Insert	100
11-5000-300*	Yes	2.0mL Clear Vial w/ 11-0000-300 Insert	100
11-5200-101*	Yes	2.0mL Clear Vial w/ Marking Patch w/ 11-0000-101 Insert	100
11-5200-300*	Yes	2.0mL Clear Vial w/ Marking Patch w/ 11-0000-300 Insert	100
11-6200-101*	Yes	2.0mL Amber Vial w/ Marking Patch w/ 11-0000-101 Insert	100
11-6200-300*	Yes	2.0mL Amber Vial w/ Marking Patch w/ 11-0000-300 Insert	100

*Class 10,000 Clean Room Packed Vials and Inserts

Inserts



Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-0000-100	Yes	300µL, Conical Mandrel Glass Insert w/ Attached Plastic Spring	100
11-0000-100-B	Yes	300µL, Conical Mandrel Glass Insert w/ Attached Plastic Spring, Bulk	1000
11-0000-100-S	Yes	Silanized 300µL, Conical Mandrel Glass Insert w/ Attached Plastic Spring	100
11-0000-101	Yes	350µL, Conical Pulled-Point Insert, (No Spring Necessary)	100
11-0000-101-B	Yes	350µL, Conical Pulled-Point Insert, (No Spring Necessary), Bulk	1000
11-0000-101-S	Yes	Silanized 350µL, Conical Pulled-Point Insert, (No Spring Necessary)	100
11-0000-140	Yes	300µL, Conical Polypropylene Insert w/ Attached Plastic Spring	100
11-0000-300	Yes	400µL, Flat Bottom Insert	100
11-0000-300-B	Yes	400µL, Flat Bottom Insert, Bulk	1000
11-0000-300-S	Yes	Silanized 400µL, Flat Bottom Insert	100



Snap Cap Component Kits

Component Kits consist of a clear clamshell outer pack with one pack of the specified Class 10,000 Clean Room packed vials and one pack of the snap caps with septa installed.

Vial	Septa	Approved for LC / GC	Qty / Pack	Blue	Dark Blue	Cat. No. Based on Green	Black	Natural	Red
	Clear Snap Cap Vials								
	PTFE Disk*	LC Only	100	11-5051B	11-5051DB	11-5051G	11-5051K	11-5051N	11-5051R
	FEP / Butyl*	GC Only	100	11-5052B	11-5052DB	11-5052G	11-5052K	11-5052N	11-5052R
	PTFE / Silicone*	GC Only	100	11-5053B	11-5053DB	11-5053G	11-5053K	11-5053N	11-5053R
	PTFE / Silicone, Pre-Cut*	LC Only	100	11-5054B	11-5054DB	11-5054G	11-5054K	11-5054N	11-5054R
	PTFE / Silicone / PTFE*	Yes	100	11-5055B	11-5055DB	11-5055G	11-5055K	11-5055N	11-5055R
	Clear Snap Cap Vials w/ Patch								
	PTFE Disk*	LC Only	100	11-5251B	11-5251DB	11-5251G	11-5251K	11-5251N	11-5251R
	FEP / Butyl*	GC Only	100	11-5252B	11-5252DB	11-5252G	11-5252K	11-5252N	11-5252R
	PTFE / Silicone*	GC Only	100	11-5253B	11-5253DB	11-5253G	11-5253K	11-5253N	11-5253R
	PTFE / Silicone, Pre-Cut*	LC Only	100	11-5254B	11-5254DB	11-5254G	11-5254K	11-5254N	11-5254R
	PTFE / Silicone / PTFE*	Yes	100	11-5255B	11-5255DB	11-5255G	11-5255K	11-5255N	11-5255R
	100 Polypropylene Snap Cap Vials, 300µL								
	PTFE Disk	LC Only	100	11-5351B-100	11-5351DB-100	11-5351G-100	11-5351K-100	11-5351N-100	11-5351R-100
	FEP / Butyl	LC Only	100	11-5352B-100	11-5352DB-100	11-5352G-100	11-5352K-100	11-5352N-100	11-5352R-100
	PTFE / Silicone	LC Only	100	11-5353B-100	11-5353DB-100	11-5353G-100	11-5353K-100	11-5353N-100	11-5353R-100
	PTFE / Silicone, Pre-Cut	LC Only	100	11-5354B-100	11-5354DB-100	11-5354G-100	11-5354K-100	11-5354N-100	11-5354R-100
	PTFE / Silicone / PTFE	LC Only	100	11-5355B-100	11-5355DB-100	11-5355G-100	11-5355K-100	11-5355N-100	11-5355R-100
	500 Polypropylene Snap Cap Vials, 500µL								
	PTFE Disk	LC Only	100	11-5351B-500	11-5351DB-500	11-5351G-500	11-5351K-500	11-5351N-500	11-5351R-500
	FEP / Butyl	LC Only	100	11-5352B-500	11-5352DB-500	11-5352G-500	11-5352K-500	11-5352N-500	11-5352R-500
	PTFE / Silicone	LC Only	100	11-5353B-500	11-5353DB-500	11-5353G-500	11-5353K-500	11-5353N-500	11-5353R-500
	PTFE / Silicone, Pre-Cut	LC Only	100	11-5354B-500	11-5354DB-500	11-5354G-500	11-5354K-500	11-5354N-500	11-5354R-500
	PTFE / Silicone / PTFE	LC Only	100	11-5355B-500	11-5355DB-500	11-5355G-500	11-5355K-500	11-5355N-500	11-5355R-500
	700 Polypropylene Snap Cap Vials, 900µL								
	PTFE Disk	LC Only	100	11-5351B-700	11-5351DB-700	11-5351G-700	11-5351K-700	11-5351N-700	11-5351R-700
	FEP / Butyl	LC Only	100	11-5352B-700	11-5352DB-700	11-5352G-700	11-5352K-700	11-5352N-700	11-5352R-700
	PTFE / Silicone	LC Only	100	11-5353B-700	11-5353DB-700	11-5353G-700	11-5353K-700	11-5353N-700	11-5353R-700
	PTFE / Silicone, Pre-Cut	LC Only	100	11-5354B-700	11-5354DB-700	11-5354G-700	11-5354K-700	11-5354N-700	11-5354R-700
	PTFE / Silicone / PTFE	LC Only	100	11-5355B-700	11-5355DB-700	11-5355G-700	11-5355K-700	11-5355N-700	11-5355R-700
	Amber Snap Cap Vials w/ Patch								
	PTFE Disk*	LC Only	100	11-6251B	11-6251DB	11-6251G	11-6251K	11-6251N	11-6251R
	FEP / Butyl*	GC Only	100	11-6252B	11-6252DB	11-6252G	11-6252K	11-6252N	11-6252R
	PTFE / Silicone*	GC Only	100	11-6253B	11-6253DB	11-6253G	11-6253K	11-6253N	11-6253R
	PTFE / Silicone, Pre-Cut*	LC Only	100	11-6254B	11-6254DB	11-6254G	11-6254K	11-6254N	11-6254R
	PTFE / Silicone / PTFE*	Yes	100	11-6255B	11-6255DB	11-6255G	11-6255K	11-6255N	11-6255R

*Class 10,000 Clean Room Packed Vials

8mm Crimp Top Vials, Snap Caps & Aluminum Seals



Vials

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-0100*	Yes	0.8mL, 8x30mm Clear	100
08-0200*	Yes	0.3mL, 6x32mm Clear Conical	100
08-0300*	Yes	0.3mL, 6x32mm Clear Round	100
08-0500*	Yes	1.0mL, 7x40mm Clear	100
08-0600*	Yes	1.0mL, 7x40mm Amber	100
08-0700*	Yes	0.7mL, 7x40mm Clear Conical	100
08-0800*	Yes	0.7mL, 7x40mm Amber Conical	100
08-0900*	Yes	0.8mL, 6x32mm Clear Conical Larger Opening, TomTec Compatible	100

*Class 10,000 Clean Room Packed Vials

Snap Caps w/ Septa

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-0051N	LC Only	PTFE Disk	100
08-0052N	GC Only	ETFE / Silicone	100
08-0053N	GC Only	PTFE / Silicone	100
08-0053N-B	GC Only	PTFE / Silicone, Bulk	1000
08-0054N	LC Only	PTFE / Silicone, Pre-Cut	100
08-0054N-B	LC Only	PTFE / Silicone, Pre-Cut, Bulk	1000
08-0055N	Yes	PTFE / Silicone / PTFE	100

Crimp Seals & Crimp Seals w/ Septa

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-0020A	GC only	FEP / Red Rubber	100
08-0030A	GC Only	PTFE / Silicone, 0.040"	100
08-0035A	LC Only	PTFE / Silicone, Pre-Cut	100
08-0040A	Yes	PTFE / Silicone / PTFE	100
08-0060A	GC Only	PTFE / Silicone, 0.060"	100

8mm Crimpers & Decrimpers

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-0000-C	Yes	Crimper for 8mm Vials	1
08-0000-D	Yes	Decrimper for 8mm Vials	1

Product Specifications

Vials

- Glass, Clear Type I, Borosilicate
- Glass, Amber N51 a Borosilicate Glass

Septa

- PTFE Disk 0.010" PTFE
- FEP / Red Rubber 0.002" Clear FEP / 0.035" Burnt Red
Natural Rubber
- ETFE / Silicone 0.002" Clear ETFE / 0.035" Burnt Red Silicone
- PTFE / Silicone 0.005" Red PTFE / 0.035" White Silicone or
0.005" Red PTFE / 0.055" White Silicone
- PTFE / Silicone, Pre-Cut 0.005" Blue PTFE / 0.035" White Silicone
- PTFE / Silicone / PTFE 0.005" Red PTFE / 0.030" White Silicone /
0.005" Red PTFE



8-425 & 10-425 Screw Thread Vials, 12 x 32mm

The Original Screw Thread Autosampler Vial. Not much more needs to be said except that MicroLiter offers these vials conveniently packaged and with all of the enhancements that allow you to purchase them in the configurations that fit your work flow. Competitively priced, Class 10,000 Clean Room Packaging with Dispenser Pack caps and septa for proper storage and handling on the bench.



The Original Wide-Opening Vial available for chromatography. For applications where the vial remains stationary, this vial is every bit as safe to use, even with inserts. MicroLiter stocks all of the popular septa configurations and convenience kits. Class 10,000 Clean Room Packaging and Dispenser Packs make us the preferred supplier.

8-425 Caps

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-0000K	Yes	8-425 Black Polypropylene Open Top	100
08-0000W	Yes	8-425 White Polypropylene Open Top	100

8-425 Septa

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-0010	LC Only	PTFE Disk, 0.010" Thick	100
08-0030	LC Only	PTFE / Silicone, 0.040" Thick, Pre-Cut	100
08-0035	GC Only	PTFE / Silicone, 0.040" Thick	100
08-0040	Yes	PTFE / Silicone / PTFE, 0.040" Thick	100
08-0060	GC Only	PTFE / Silicone, 0.060" Thick	100

8-425 Vials

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-1000*	Yes	Clear Vial	100
08-1000-S	Yes	Silanized Clear Vial	100
08-1200*	Yes	Clear Vial w/ Marking Patch	100
08-1200-S	Yes	Silanized Clear Vial w/ Marking Patch	100
08-1200-100	Yes	Clear Vial w/ Marking Patch and 100µL Inserts	100
08-1300-100	Yes	100µL Clear Vial, Polypropylene	100
08-2000*	Yes	Amber Vial	100
08-2200*	Yes	Amber Vial w/ Marking Patch	100
08-2200-S	Yes	Silanized Amber Vial w/ Marking Patch	100

*Class 10,000 Clean Room Packed Vials

10-425 Caps

Cat. No.	Approved for LC / GC	Description	Qty / Pack
10-0000W	Yes	10-425 White Polypropylene Open Top	100

10-425 Septa

Cat. No.	Approved for LC / GC	Description	Qty / Pack
10-0010	LC Only	PTFE Disk, 0.010" Thick	100
10-0040	Yes	PTFE / Silicone / PTFE, 0.040" Thick	100
10-0060	GC Only	PTFE / Silicone, 0.060" Thick	100

10-425 Vials

Cat. No.	Approved for LC / GC	Description	Qty / Pack
10-1000*	Yes	Clear Vial	100
10-1000-S	Yes	Silanized Clear Vial	100
10-1200*	Yes	Clear Vial w/ Marking Patch	100
10-1200-S	Yes	Silanized Clear Vial w/ Marking Patch	100
10-2200*	Yes	Amber Vial w/ Marking Patch	100
10-2200-S	Yes	Silanized Amber Vial w/ Marking Patch	100

*Class 10,000 Clean Room Packed Vials

Product Specifications

Vials

- Closure Requirement.....8-425 or 10-425 Screw Thread Caps
- Glass, ClearClass 10,000 Clean, Type I, Borosilicate
- Glass, AmberClass 10,000 Clean, Type I, Borosilicate

Septa

- PTFE Disk0.010" PTFE Disk
- PTFE / SiliconePost-baked .005" Red PTFE / 0.035" White Silicone or Post-baked 0.005" Red PTFE / 0.055" White Silicone
- PTFE / Silicone, Pre-Cut.....0.005" Blue PTFE / 0.035" White Silicone
- PTFE / Silicone / PTFE0.005" Red PTFE / 0.030" White Silicone / 0.005" Red PTFE

Inserts for 10-425 Screw Thread Vials

Cat. No.	Approved for LC / GC	Description	Qty / Pack
11-0000-100	Yes	300µL, Conical Mandrel Glass Insert w/ Spring	100
11-0000-100-B	Yes	300µL, Conical Mandrel Glass Insert w/ Spring, Bulk 1000	
11-0000-100-S	Yes	Silanized 300µL, Conical Mandrel Glass Spring Insert w/ Attached Plastic Spring	100
11-0000-101	Yes	350µL, Conical Pulled-Point Insert	100
11-0000-140	Yes	300µL, Conical Polypropylene Insert w/ Spring	100
11-0000-300	Yes	400µL, Flat Bottom Insert	100

Vials w/ Limited Volume Inserts

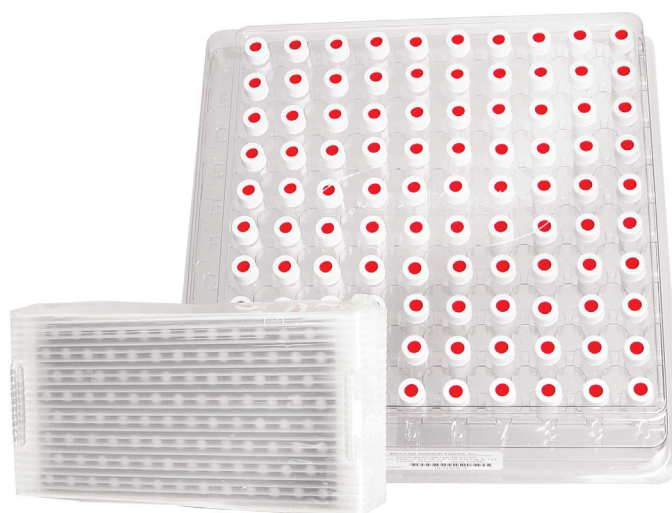
Cat. No.	Approved for LC / GC	Description	Qty / Pack
10-1000-101*	Yes	Clear Vial w/ 11-0000-101 Insert	100
10-1000-300*	Yes	Clear Vial w/ 11-0000-300 Insert	100
10-1200-101*	Yes	Clear Vial w/ Marking Patch w/ 11-0000-101 Insert	100
10-1200-300*	Yes	Clear Vial w/ Marking Patch w/ 11-0000-300 Insert	100
10-2200-101*	Yes	Amber Vial w/ Marking Patch w/ 11-0000-101 Insert	100
10-2200-300*	Yes	Amber Vial w/ Marking Patch w/ 11-0000-300 Insert	100

*Class 10,000 Clean Room Packed Vials and Inserts

8-425 & 10-425 Screw Thread Vial Component & Assembled Kits



Component kits offer the convenience of one product number for the vial, cap and septa.



Assembled kits are shipped with the septa installed in the cap and the cap screwed on the vial.

Septa	Qty / Pack	Component Kits			Assembled Vial Kits		
		8-425 Vials		10-425 Vials	8-425 Vials		10-425 Vials
Clear Vials		Black Open Top	White Open Top	White Open Top	Black Open Top	White Open Top	White Open Top
PTFE Disk	100	08-1010K*	08-1010W*	10-1010W*	08-1010K-A	08-1010W-A	10-1010W-A
PTFE / Silicone, Pre-Cut	100	08-1030K*	08-1030W*	—	08-1030K-A	08-1030W-A	—
PTFE / Silicone, 40 mil	100	08-1035K*	08-1035W*	—	08-1035K-A	08-1035W-A	—
PTFE / Silicone / PTFE	100	08-1040K*	08-1040W*	10-1040W*	08-1040K-A	08-1040W-A	10-1040W-A
PTFE / Silicone, 60 mil	100	08-1060K*	08-1060W*	10-1060W*	08-1060K-A	08-1060W-A	10-1060W-A
Clear Vials w/ Marking Patch							
PTFE Disk	100	08-1210K*	08-1210W*	10-1210W*	08-1210K-A	08-1210W-A	10-1210W-A
PTFE / Silicone, Pre-Cut	100	08-1230K*	08-1230W*	—	08-1230K-A	08-1230W-A	—
PTFE / Silicone, 40 mil	100	08-1235K*	08-1235W*	—	08-1235K-A	08-1235W-A	—
PTFE / Silicone / PTFE	100	08-1240K*	08-1240W*	10-1240W*	08-1240K-A	08-1240W-A	10-1240W-A
PTFE / Silicone, 60 mil	100	08-1260K*	08-1260W*	10-1260W*	08-1260K-A	08-1260W-A	10-1260W-A
Amber Vials w/ Marking Patch							
PTFE Disk	100	08-2210K*	08-2210W*	10-2210W*	08-2210K-A	08-2210W-A	10-2210W-A
PTFE / Silicone, Pre-Cut	100	08-2230K*	08-2230W*	—	08-2230K-A	08-2230W-A	—
PTFE / Silicone, 40 mil	100	08-2235K*	08-2235W*	—	08-2235K-A	08-2235W-A	—
PTFE / Silicone / PTFE	100	08-2240K*	08-2240W*	10-2240W*	08-2240K-A	08-2240W-A	10-2240W-A
PTFE / Silicone, 60 mil	100	08-2260K*	08-2260W*	10-2260W*	08-2260K-A	08-2260W-A	10-2260W-A

*Class 10,000 Clean Room Packed Vials



Headspace Autosampler Vials

Screw Thread Headspace Vials Work on a Variety of Instruments

- Excellent performance on all CTC Analytics Systems requiring magnet compatible closures
- Modern Agilent Headspace Samplers
- PerkinElmer Headspace Samplers
- Tekmar and most other autosamplers that do not require transports

16mm ScrewTin™ Headspace Vials

Cat. No.	Description	Qty / Pack
16-1000*	10mL Clear Vial, 22 x 46mm	100
16-6100*	10mL Amber Vial, 22 x 46mm	100
16-2000*	20mL Clear Vial, 22 x 75mm	100
16-2000-S	Silanized, 20mL Clear Vial, 22 x 75mm	100
16-6000*	20mL Amber Vial, 22 x 75mm	100

*Class 10,000 Clean Room Packed Vials

16mm Screw Thread Closures w/ Septa



Cat. No.	Description	Qty / Pack
16-0030M	16mm ScrewTin™ Cap w/ PTFE / Butyl, 0.060"	100
16-0050M	16mm ScrewTin Cap w/ White PTFE / Blue Silicone, 0.060"	100
16-0055M	16mm ScrewTin Cap w/ Blue PTFE / White Silicone, 0.060"	100
16-0080M	16mm ScrewTin Cap w/ FKM, 0.055"	100

20mm Crimpers & Decrimpers

Cat. No.	Approved for LC / GC	Description	Qty / Pack
20-0000-C	Yes	Crimper for 20mm Crimp Vials	1
20-0000-D	Yes	Decrimper for 20mm Crimp Vials	1

A Complete Selection of 20mm Crimp Headspace Vials

Count on MicroLiter to deliver a clean, well manufactured headspace vial.

- Amber headspace vials for PerkinElmer, Agilent and Tekmar
- Flat Bottom Vials for older Agilent Headspace Samplers
- 10mL Flat and Beveled Crimp Seal Finish Vials for CTC Analytics PAL® Systems
- AlumiTin™ aluminum seals with the magnetic characteristics of metallic seals
- Improved 20mL vial for CTC Analytics Systems
- Septa designed for optimum performance in a variety of applications and heat ranges
- Excellent performance on PerkinElmer

20mm Crimp Seal Headspace Vials

Cat. No.	Recommended for	Description	Qty / Pack
20-1000*	LEAP / CTC, Tekmar	10mL Clear Vial, 22 x 46mm, Beveled Crimp	100
20-1000-S	LEAP / CTC, Tekmar	Silanized 10mL Clear Vial, 22 x 46mm, Beveled Crimp	100
20-1100*	LEAP / CTC, Tekmar	10mL Clear Vial, 22 x 46mm, Flat Crimp	100
20-2000*	PerkinElmer, Tekmar	20mL Clear Vial, 23 x 75mm, Beveled Crimp	100
20-2000-S	PerkinElmer, Tekmar	Silanized 20mL Clear Vial, 23 x 75mm, Beveled Crimp	100
20-6000*	PerkinElmer, Tekmar	20mL Amber Vial, 23 x 75mm, Beveled Crimp	100
20-2100*	LEAP / CTC, Tekmar	20mL Clear Vial, 22 x 75mm, Beveled Crimp	100
20-2100-S	LEAP / CTC, Tekmar	Silanized 20mL Clear Vial, 22 x 75mm, Beveled Crimp	100
20-2300*	Agilent, LEAP / CTC	20mL Clear Vial, 22 x 75mm, Flat Crimp	100
20-2400*	Agilent	20mL Clear Vial, 22 x 75mm, Flat Bottom	100
20-5000*	LEAP / CTC	5.0mL Clear Vial, 22 x 38mm, Beveled Crimp	100

*Class 10,000 Clean Room Packed Vials

Septa for 20mm Crimp Seals

Cat. No.	Recommended for	Description	Qty / Pack
20-0020	All	Butyl Only	100
20-0020-B	All	Butyl Only, Bulk	1000
20-0021	All	Butyl Only	100
20-0025	All but LEAP / CTC	Butyl Stopper	100
20-0025-B	All but LEAP / CTC	Butyl Stopper, Bulk	1000
20-0027	All but LEAP / CTC	Butyl Stopper	100
20-0030	All	PTFE / Butyl	100
20-0040	All	Molded PTFE / Butyl	100
20-0050	All	Natural PTFE / Blue Silicone, 0.125" Thick	100
20-0051	All	Tan PTFE / White Silicone, 0.130" Thick	100
20-0051-B	All	Tan PTFE / White Silicone, 0.130" Thick, Bulk	1000
20-0060	All	Aluminum Foil / Silicone, 0.125" Thick	100

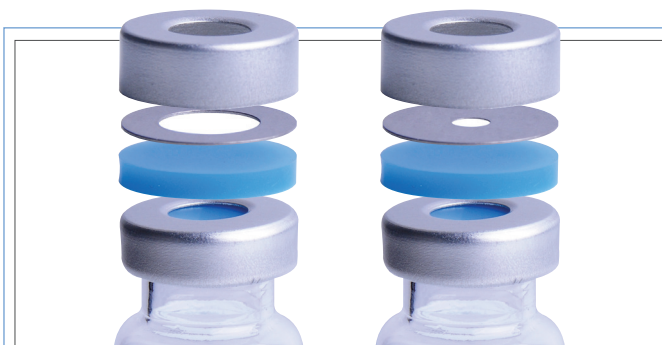
20mm Crimp Seals

Cat. No.	Recommended for	Description	Qty / Pack
20-0000AS	All but LEAP / CTC	Seal Only, Aluminum	100
20-0000AS-B	All but LEAP / CTC	Seal Only, Aluminum, Bulk	1000
20-0000M	LEAP / CTC	Seal Only, for Magnetic Handling	100
20-0000ML	LEAP / CTC	Seal Only, for Magnetic Handling, Large Opening, Extended Apron	100
20-0000ML-B	LEAP / CTC	Seal Only, for Magnetic Handling, Large Opening, Extended Apron, Bulk	1000
20-0000MLS	LEAP / CTC	Seal Only, for Magnetic Handling, Large Opening, Standard Apron	100
20-0000MLS-B	LEAP / CTC	Seal Only, for Magnetic Handling, Large Opening, Standard Apron, Bulk	1000
20-0000P	All but LEAP / CTC	Seal Only, Pressure Release at 5.0 Bar	100
20-0000T	N/A	Seal Only, Tear Off	100



Septa Heat Range & Usage Reference Chart

Butyl Stopper & Disk	- 40° to 120° C	Used when PTFE is not required
PTFE / Butyl	- 40° to 120° C	Economy Septa w/ Low Background Peaks
PTFE / Molded Butyl	- 40° to 120° C	Tightest Seal of all items using PTFE w/ Low Background Peaks
PTFE / Silicone	- 60° to 200° C	Excellent for volatiles
Aluminum / Silicone	- 60° to 220° C	Excellent for volatiles. Not recommended for repeat injections
FKM	-20° to 200° C	Excellent Resistance to Aggressive Fuels and Chemicals



Try the AlumiTin™ Seal for PAL® Systems & AlumiTin with Smaller Opening for HS500

- Easy to crimp aluminum seals with inner ring for PAL Systems magnetics
- Available in all approved septa for users of CTC Analytics Sample Handlers
- Now available with a new smaller opening for older yet reliable HS500 Headspace Injectors
- AlumiTin Seals offer a consistently tighter seal than tin crimp seals

20mm Crimp Seals w/ Septa

Cat. No.	Recommended for	Description	Qty / Pack
20-0020AS	All but LEAP / CTC	20mm Aluminum w/ Butyl Only	100
20-0030AS	All but LEAP / CTC	20mm Aluminum w/ PTFE / Butyl	100
20-0040AS	All but LEAP / CTC	20mm Aluminum w/ PTFE / Molded Butyl	100
20-0050AS	All but LEAP / CTC	20mm Aluminum w/ Natural PTFE / Blue Silicone	100
20-0051AS	All but LEAP / CTC	20mm Aluminum w/ Tan PTFE / White Silicone	100
20-0051AS-B	All but LEAP / CTC	20mm Aluminum w/ Tan PTFE / White Silicone, Bulk	1000
20-0060AS	All but LEAP / CTC	20mm Aluminum w/ Aluminum / Silicone	100
20-0020AT	LEAP / CTC	20mm AlumiTin™ Large Opening w/ Butyl Only	100
20-0021AT	LEAP / CTC	20mm AlumiTin Large Opening w/ Butyl Only, Chemically Inert	100
20-0030AT	LEAP / CTC	20mm AlumiTin Large Opening w/ PTFE / Butyl	100
20-0040AT	LEAP / CTC	20mm AlumiTin Large Opening w/ PTFE / Molded Butyl	100
20-0050AT	LEAP / CTC	20mm AlumiTin Large Opening w/ Natural PTFE / Blue Silicone, 0.125"	100
20-0051AT	LEAP / CTC	20mm AlumiTin Large Opening w/ Tan PTFE / White Silicone, 0.130"	100
20-0060AT	LEAP / CTC	20mm AlumiTin Large Opening w/ Aluminum / Silicone	100
20-0020ATS	LEAP / CTC	20mm AlumiTin Small Opening w/ Butyl Only	100
20-0021ATS	LEAP / CTC	20mm AlumiTin Small Opening w/ Butyl Only, Chemically Inert	100
20-0030ATS	LEAP / CTC	20mm AlumiTin Small Opening w/ PTFE / Butyl	100
20-0040ATS	LEAP / CTC	20mm AlumiTin Small Opening w/ PTFE / Molded Butyl	100
20-0050ATS	LEAP / CTC	20mm AlumiTin Small Opening w/ Natural PTFE / Blue Silicone, 0.125"	100
20-0051ATS	LEAP / CTC	20mm AlumiTin Small Opening w/ Tan PTFE / White Silicone, 0.130"	100
20-0060ATS	LEAP / CTC	20mm AlumiTin Small Opening w/ Aluminum / Silicone	100
20-0020M	LEAP / CTC	20mm Steel w/ Butyl Only	100
20-0021M	LEAP / CTC	20mm Steel w/ Butyl Only, Chemically Inert	100
20-0030M	LEAP / CTC	20mm Steel w/ PTFE / Butyl	100
20-0040M	LEAP / CTC	20mm Steel w/ PTFE / Molded Butyl	100
20-0050M	LEAP / CTC	20mm Steel w/ Natural PTFE / Blue Silicone, 0.125"	100
20-0051M	LEAP / CTC	20mm Steel w/ Tan PTFE / White Silicone, 0.130"	100
20-0060M	LEAP / CTC	20mm Steel w/ Aluminum / Silicone	100
20-0050ML	LEAP / CTC	Large Opening 20mm Steel w/ Natural PTFE / Blue Silicone, 0.125", Extended Apron	100
20-0050MLS	LEAP / CTC	Large Opening 20mm Steel w/ Natural PTFE / Blue Silicone, 0.125", Standard Apron	100
20-0050ML-B	LEAP / CTC	Large Opening 20mm Steel w/ Natural PTFE / Blue Silicone, 0.125", Extended Apron, Bulk	1000
20-0050MLS-B	LEAP / CTC	Large Opening 20mm Steel w/ Natural PTFE / Blue Silicone, 0.125", Standard Apron, Bulk	1000
20-0051ML	LEAP / CTC	Large Opening 20mm Steel w/ Tan PTFE / White Silicone, 0.130", Extended Apron	100
20-0051MLS	LEAP / CTC	Large Opening 20mm Steel w/ Tan PTFE / White Silicone, 0.130", Standard Apron	100
20-0051ML-B	LEAP / CTC	Large Opening 20mm Steel w/ Tan PTFE / White Silicone, 0.130", Extended Apron, Bulk	1000
20-0051MLS-B	LEAP / CTC	Large Opening 20mm Steel w/ Tan PTFE / White Silicone, 0.130", Standard Apron, Bulk	1000
20-0021P	All but LEAP / CTC	20mm Aluminum Pressure Release w/ Butyl Only, Chemically Inert	100
20-0040P	All but LEAP / CTC	20mm Aluminum Pressure Release w/ PTFE / Molded Butyl	100
20-0050P	All but LEAP / CTC	20mm Aluminum Pressure Release w/ Natural PTFE / Blue Silicone, 0.125"	100
20-0051P	All but LEAP / CTC	20mm Aluminum Pressure Release w/ Tan PTFE / White Silicone, 0.130"	100
20-0060P	All but LEAP / CTC	20mm Aluminum Pressure Release w/ Aluminum / Silicone	100

Concentrator & Sample Vials



Vials, Clear & Amber

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-1000*	Yes	2.0mL Clear, 8-425, 12 x 32mm	100
08-2200*	Yes	2.0mL Amber w/ Marking Patch, 8-425, 12 x 32mm	100
13-1000*	Yes	4.0mL Clear, 13-425, 15 x 45mm	100
13-1000-S	Yes	4.0mL Clear Silanized, 13-425, 15x45mm	100
13-1200*	Yes	4.0mL Clear w/ Marking Patch, 13-425, 15 x 45mm	100
13-2000*	Yes	4.0mL Amber, 13-425, 15x45mm	100
13-2200*	Yes	4.0mL Amber w/ Marking Patch, 13-425, 15 x 45mm	100
15-1000-8*	N/A	8.0mL Clear Vial, 15-425, 17 x 60mm	150
15-2000-8*	N/A	8.0mL Amber Vial, 15-425, 17 x 60mm	150
15-1000-12*	N/A	12mL Clear, 15-425, 19 x 65mm	150
15-2000-12*	N/A	12mL Amber, 15-425, 19 x 65mm	150
18-1000-16*	N/A	16mL Clear, 18-400, 21 x 70mm	200
18-2000-16*	N/A	16mL Amber, 18-400, 21 x 70mm	200
24-1000-20	N/A	20mL Clear, 24-400 28 x 57mm	100
24-2000-20	N/A	20mL Amber, 24-400 28 x 57mm	100
24-1000-30	N/A	30mL Clear, 24-400 28 x 73mm	100
24-2000-30	N/A	30mL Amber, 24-400 28 x 73mm	100
24-1000-40	N/A	40mL Clear, 24-400 28 x 95mm	100
24-2000-40	N/A	40mL Amber, 24-400 28 x 95mm	100

*Class 10,000 Clean Room Packed Vials

Caps, Screw Thread, Open Top & Septa

Cat. No.	Approved for LC / GC	Description	Qty / Pack
08-0000K	Yes	Black Polypropylene, 8-425 Open Top	100
08-0000KS	Yes	Black Polypropylene, 8-425 Solid Top	100
08-0010	Yes	PTFE - 0.010" for 8-425 Caps	100
08-0060	GC Only	PTFE / Silicone - 0.060" for 8-425 Caps	100
13-0000K	Yes	Black Polypropylene, 13-425 Open Top	100
13-0000KP	N/A	Black Phenolic, 13-425 Open Top	100
13-0010	LC Only	PTFE - 0.010"	100
13-0060	GC Only	PTFE / Silicone - 0.060" for 13-425 Caps	100
15-0000K	Yes	Black Polypropylene, 15-425 Open Top	100
15-0060	GC Only	PTFE / Silicone - 0.060" for 15-425 Caps	100
18-0000K	Yes	Black Polypropylene, 18-400 Open Top	100
18-0060	GC Only	PTFE / Silicone - 0.060" for 18-400 Caps	100

Caps w/ Septa Installed

Cat. No.	Approved for LC / GC	Description	Qty / Pack
13-0050N	N/A	Clear Polypropylene Cap, 13-425 Solid Top	100
13-0060K	GC Only	Black Polypropylene Cap w/ PTFE / Silicone - 0.060"	100
13-0060KP	GC Only	Black Phenolic, 13-425 Open Top w/ PTFE / Silicone - 0.060"	100
13-0010KPS	LC Only	Black Phenolic, 13-425 Solid Top w/ PTFE - 0.010"	100
15-0010KPS	LC Only	Black Phenolic, 15-425 Solid Top w/ PTFE - 0.010"	100
15-0060K	GC Only	Black Polypropylene Cap w/ Bonded PTFE / Silicone - 0.060"	100
24-00101W	GC Only	White Polypropylene Cap w/ Bonded PTFE / Silicone - 0.100"	100

Conical Concentrator & Reaction Vials



All prices include cap with Bonded PTFE / Silicone Septa

Cat. No.	Description	Qty / Pack
09-3036B	1.5mL Clear, 12 x 32mm, 9mm	100
09-3236B	1.5mL Amber, 12 x 32mm, 9mm	100
13-3061K	1.5mL Clear, 13 x 44mm, 13-425	100
13-4061K	4.0mL Clear, 15 x 51mm, 13-425	100
15-3060K	5.0mL Clear, 17 x 51mm, 15-425	100
18-3060W	10mL Clear, 21 x 61mm, 18-400	100
22-30101W	20mL Clear, 28 x 67mm, 22-400	100
24-30101W	40mL Clear, 28 x 103mm, 24-414	100
24-40101W	60mL Clear, 28 x 143mm, 24-414	100



Product Specifications

Vials

- Glass, ClearType I, Borosilicate
- Glass, AmberType I, Borosilicate

Septa

- PTFE Liner.....0.010" Liner
- PTFE / Silicone0.010" PTFE / 0.050" White Silicone
-0.010" PTFE / 0.090" Tan Silicone

Closures

- ClosuresPolypropylene (PP) or Phenolic

Component & Assembled Kits

Component Kits are shipped with a pack of vials, a pack of caps and a pack of septa.

Assembled Kits are shipped with the septa installed in the cap and the cap screwed on the vial.

Vial	Closure	Septa	Qty / Pack	Component Kits Cat. No.	Assembled Kits Cat. No.
2.0mL Clear	08-0000K, Black Polypropylene, 8-425	08-0060, PTFE / Silicone	100	08-1060K*	08-1060K-A
2.0mL Clear w/ Patch	08-0000K, Black Polypropylene, 8-425	08-0060, PTFE / Silicone	100	08-1260K*	08-1260K-A
2.0mL Amber w/ Patch	08-0000K, Black Polypropylene, 8-425	08-0060, PTFE / Silicone	100	08-2260K*	08-2260K-A
2.0mL Clear	08-0000KS, Black Polypropylene, 8-425 Solid Top	08-0060, PTFE / Silicone	100	08-1060KS*	08-1060KS-A
2.0mL Clear w/ Patch	08-0000KS, Black Polypropylene, 8-425 Solid Top	08-0060, PTFE / Silicone	100	08-1260KS*	08-1260KS-A
2.0mL Amber w/ Patch	08-0000KS, Black Polypropylene, 8-425 Solid Top	08-0060, PTFE / Silicone	100	08-2260KS*	08-2260KS-A
4.0mL Clear	13-0000K, Black Polypropylene, 13-425	13-0010, PTFE Disk	100	13-1010K*	13-1010K-A
4.0mL Clear w/ Patch	13-0000K, Black Polypropylene, 13-425	13-0010, PTFE Disk	100	13-1210K*	13-1210K-A
4.0mL Amber	13-0000K, Black Polypropylene, 13-425	13-0010, PTFE Disk	100	13-2010K*	13-2010K-A
4.0mL Amber w/ Patch	13-0000K, Black Polypropylene, 13-425	13-0010, PTFE Disk	100	13-2210K*	13-2210K-A
4.0mL Clear	13-0000KP, Black Phenolic, 13-425	13-0010, PTFE Disk	100	13-1010KP*	13-1010KP-A
4.0mL Clear w/ Patch	13-0000KP, Black Phenolic, 13-425	13-0010, PTFE Disk	100	13-1210KP*	13-1210KP-A
4.0mL Amber	13-0000KP, Black Phenolic, 13-425	13-0010, PTFE Disk	100	13-2010KP*	13-2010KP-A
4.0mL Amber w/ Patch	13-0000KP, Black Phenolic, 13-425	13-0010, PTFE Disk	100	13-2210KP*	13-2210KP-A
4.0mL Clear	13-0010KPS, Black Phenolic, 13-425 Solid Top w/ PTFE Liner	—	100	13-1010KPS*	13-1010KPS-A
4.0mL Clear w/ Patch	13-0010KPS, Black Phenolic, 13-425 Solid Top w/ PTFE Liner	—	100	13-1210KPS*	13-1210KPS-A
4.0mL Amber	13-0010KPS, Black Phenolic, 13-425 Solid Top w/ PTFE Liner	—	100	13-2010KPS*	13-2010KPS-A
4.0mL Amber w/ Patch	13-0010KPS, Black Phenolic, 13-425 Solid Top w/ PTFE Liner	—	100	13-2210KPS*	13-2210KPS-A
4.0mL Clear	13-0000K, Black Polypropylene, 13-425	13-0060, PTFE / Silicone	100	13-1060K*	13-1060K-A
4.0mL Clear w/ Patch	13-0000K, Black Polypropylene, 13-425	13-0060, PTFE / Silicone	100	13-1260K*	13-1260K-A
4.0mL Amber	13-0000K, Black Polypropylene, 13-425	13-0060, PTFE / Silicone	100	13-2060K*	13-2060K-A
4.0mL Amber w/ Patch	13-0000K, Black Polypropylene, 13-425	13-0060, PTFE / Silicone	100	13-2260K*	13-2260K-A
4.0mL Clear	13-0000KP, Black Phenolic, 13-425	13-0060, PTFE / Silicone	100	13-1060KP*	13-1060KP-A
4.0mL Clear w/ Patch	13-0000KP, Black Phenolic, 13-425	13-0060, PTFE / Silicone	100	13-1260KP*	13-1260KP-A
4.0mL Amber	13-0000KP, Black Phenolic, 13-425	13-0060, PTFE / Silicone	100	13-2060KP*	13-2060KP-A
4.0mL Amber w/ Patch	13-0000KP, Black Phenolic, 13-425	13-0060, PTFE / Silicone	100	13-2260KP*	13-2260KP-A
8.0mL Clear	15-0000K, Black Polypropylene, 15-425	15-0060, PTFE / Silicone	150	15-1060K-8*	15-1060K-8A
8.0mL Amber	15-0000K, Black Polypropylene, 15-425	15-0060, PTFE / Silicone	150	15-2060K-8*	15-2060K-8A
8.0mL Clear	15-0010KPS, Black Phenolic, 15-425 Solid Top w/ PTFE Liner	—	150	15-1010KPS-8*	15-1010KPS-8A
8.0mL Amber	15-0010KPS, Black Phenolic, 15-425 Solid Top w/ PTFE Liner	—	150	15-2010KPS-8*	15-2010KPS-8A
12mL Clear	15-0000K, Black Polypropylene, 15-425	15-0060, PTFE / Silicone	150	15-1060K-12*	15-1060K-12A
12mL Amber	15-0000K, Black Polypropylene, 15-425	15-0060, PTFE / Silicone	150	15-2060K-12*	15-2060K-12A
12mL Clear	15-0010KPS, Black Phenolic, 15-425 Solid Top w/ PTFE Liner	—	150	15-1010KPS-12*	15-1010KPS-12A
12mL Amber	15-0010KPS, Black Phenolic, 15-425 Solid Top w/ PTFE Liner	—	150	15-2010KPS-12*	15-2010KPS-12A
20mL Clear	24-00101W, White PP Cap w/ Bonded PTFE / Silicone Septa	—	100	24-10101W-20	24-10101W-20A
20mL Amber	24-00101W, White PP Cap w/ Bonded PTFE / Silicone Septa	—	100	24-20101W-20	24-20101W-20A
30mL Clear	24-00101W, White PP Cap w/ Bonded PTFE / Silicone Septa	—	100	24-10101W-30	24-10101W-30A
30mL Amber	24-00101W, White PP Cap w/ Bonded PTFE / Silicone Septa	—	100	24-20101W-30	24-20101W-30A
40mL Clear	24-00101W, White PP Cap w/ Bonded PTFE / Silicone Septa	—	100	24-10101W-40	24-10101W-40A
40mL Amber	24-00101W, White PP Cap w/ Bonded PTFE / Silicone Septa	—	100	24-20101W-40	24-20101W-40A

*Class 10,000 Clean Room Packed Vials



Syringe Filters for Sample Preparation

MicroLiter's Syringe Filters

Filtration of samples prior to injection can improve the results of your analysis and extend the life of your column. MicroLiter's syringe filters are manufactured with the most advanced construction methods and design features available today.

A variety of media types and pore sizes are available. Housings are polypropylene, solvent resistant and clearly marked for media and pore size. All packaging is marked with lot numbers for complete traceability. Glass Fiber prefilters (1mm) are available to extend filter media life from three to seven times the normal usage.

Count on MicroLiter to offer you proper solutions for management of your filtration products until you are ready to use them. MicroLiter syringe filters are packaged into tubes that are easily incorporated with our dispenser. The dispenser provides a safe, clean means of handling your filters once you open the packaging.

Syringe Filters & Disposable Syringes

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30mm Syringe Filters



F30-2020

Cat. No.	Media	Pore Size	Qty / Pack
F30-1020	PTFE	0.20µm	100
F30-1045	PTFE	0.45µm	100
F30-2020	Nylon	0.20µm	100
F30-2045	Nylon	0.45µm	100

30mm w/ 1µm Glass Fiber Prefilter



F30-2045-1GF

Cat. No.	Media	Pore Size	Qty / Pack
F30-2020-1GF	Nylon	0.20µm	100
F30-2045-1GF	Nylon	0.45µm	100

25mm Syringe Filters



F25-1020

F25-1045

F25-2020

F25-2045

F25-4045

Cat. No.	Media	Pore Size	Qty / Pack
F25-1020	PTFE	0.20µm	100
F25-1045	PTFE	0.45µm	100
F25-2020	Nylon	0.20µm	100
F25-2045	Nylon	0.45µm	100
F25-4045	PVDF	0.45µm	100

25mm w/ 1µm Glass Fiber Prefilter



F25-2020-1GF

Cat. No.	Media	Pore Size	Qty / Pack
F25-2020-1GF	Nylon	0.20µm	100
F25-2045-1GF	Nylon	0.45µm	100

17mm Syringe Filters



F17-2045

Cat. No.	Media	Pore Size	Qty / Pack
F17-2045	Nylon	0.45µm	100

17mm Syringe Filters w/ 1µm Glass Fiber Prefilter



F17-2020-1GF

Cat. No.	Media	Pore Size	Qty / Pack
F17-2020-1GF	Nylon	0.20µm	100
F17-2045-1GF	Nylon	0.45µm	100

13mm Syringe Filters



F13-4045

Cat. No.	Media	Pore Size	Qty / Pack
F13-1045	PTFE	0.45µm	100
F13-2020	Nylon	0.20µm	100
F13-2045	Nylon	0.45µm	100
F13-4045	PVDF	0.45µm	100

13mm Syringe Filters w/ 1µm Glass Fiber Prefilter



F13-2020-1GF

F13-2045-1GF

Cat. No.	Media	Pore Size	Qty / Pack
F13-1020-1GF	PTFE	0.20µm	100
F13-2020-1GF	Nylon	0.20µm	100
F13-2045-1GF	Nylon	0.45µm	100

Disposable Syringes w/ Polyethylene Plungers



F5-A3



F5-AL30

Cat. No.	Description	Qty / Pack
F5-A1	1.0mL Tuberculin	100
F5-A3	3.0mL Luer Slip Cen	100
F5-A5	5.0mL Luer Slip Cen	100
F5-A10	10mL Luer Slip Cen	100
F5-A20	20mL Luer Slip Cen	100
F5-A30	30mL Luer Slip Cen	50
F5-A50	50mL Luer Slip Cen	30
F5-AL3	3.0mL Luer Lock	100
F5-AL5	5.0mL Luer Lock	100
F5-AL10	10mL Luer Lock	100
F5-AL20	20mL Luer Lock	100
F5-AL30	30mL Luer Lock	50
F5-AL50	50mL Luer Lock	30



Count on MicroLiter to offer you proper solutions for management of your filtration products until you are ready to use them. Our dispensers allow you to plug in our tube packs to have a safe, clean means of handling your filters once you open the packaging.

MicroLiter Dispenser

Cat. No.	Qty / Kit
00-DISP	Sold Individually w/ Adapter





Accessories, Consumables & Syringes

Important Changes in Our Syringe Product Lines

In cooperation with CTC Analytics, X-Type Syringes and C-Line series of syringes for PAL® all LC, GC and Headspace instruments manufactured by the Hamilton Company have become the principle product line of Syringes supported by MicroLiter. This change insures that the products we offer are tested and fully approved by CTC for use on the PAL.

Because of this you will see changes in some product numbers that reflect the CTC Analytics theories in assigning product numbers. While not always exact, it should assist all PAL users in identifying products we offer with CTC literature supplied with the instrument.

The new DLW platform introduced by CTC has added a new product line of consumables for this highly versatile sample handler.

The design of the C-line is based on the improvements employed in CTC's X-Type syringe. Excluded are the inert needle material and the specially treated inside of the glass barrel. As with the X-Type syringe the construction is characterized by a direct glass/needle connection that completely avoids sample contact with glue or cement. A long-life polymer compound of the latest generation is used as plunger tip material. Additionally, a new flange design with adjustable plunger protects the tip from squeezing.

C-Line will replace all current LC and GC syringes for Liquid and Headspace applications. C-Line syringes are direct replacements for the same product numbers and prices as the previous models.

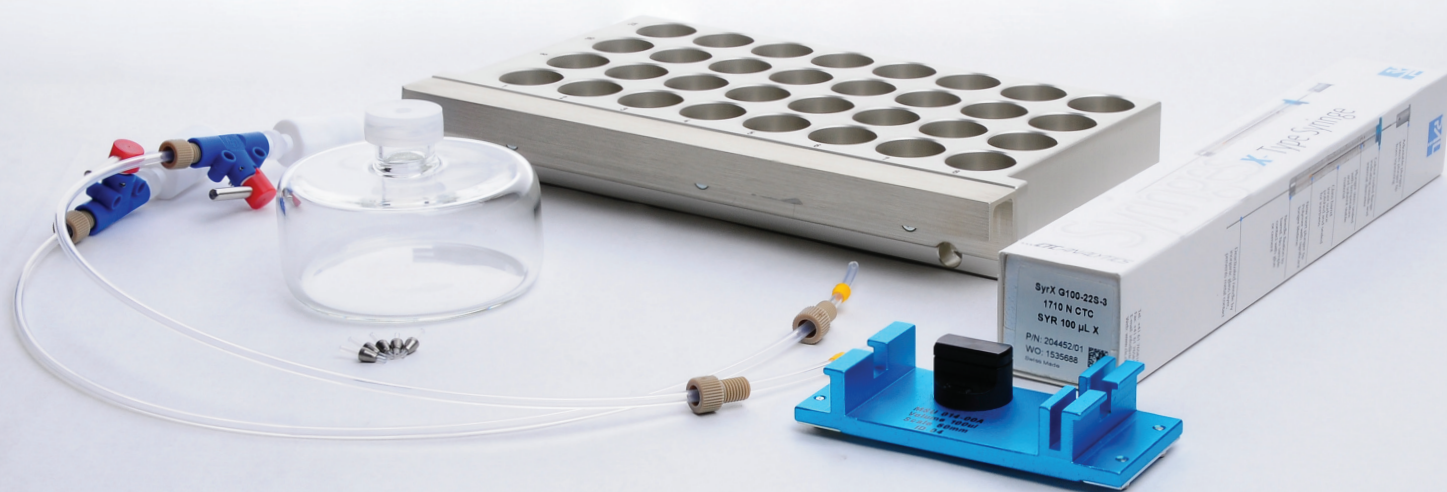
You will also see that we have reduced the number of syringe product lines we will support. If you are currently purchasing another brand of syringes we will continue to service your needs so that you do not have to validate another syringe for your instrument.

CTC Analytics Consumables



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General Specifications

Within these listings are fitted and gastight plungers, fixed needles with various point and gauge configurations. Use the chart below to choose the point style required for your application. Please refer to the specific instrument listings on the following pages for easier selection.

Point Styles:

- 3 Blunt (straight) cut for LC
- 5 Side hole needle, with a sharp conical solid tip for GC
- AS Conical Tip with 8° bevel for GC

Gauge:

- 22 Large Outer Diameter
- 22s Large Outer Diameter Low Dead-Volume
- 23 Large Outer Diameter for Merlin MicroSeal
- 26 Small Outer Diameter
- 26s Small Outer Diameter Low Dead-Volume

Plunger Styles:

- Fitted Stainless Steel Plunger
- PTFE Tipped
- Polymer Tipped

Application:

- GC and Limited LC Applications
- GC and Volatile LC
- Low Volatility High-Throughput LC

LC Samplers

For LC work, a needle gauge of 22 with a blunt tip (point style 3) is required to match the valve inlet. 22s gauge needle specifications are recommended to reduce coring of septa when possible.

GC Samplers

For GC work we recommend a small diameter, low dead-volume needle (26s = 26 gauge with a low dead volume). The result will be: easy purging of air, high reproducibility and low cleaning solvent use.

Needle point styles must be considered when piercing a GC septum. One-side PTFE and one-side Rubber or Silicone septa commonly used for GC applications require a beveled conical point style AS or side-hole needle (point style 5) to prevent coring.

Gastight plungers are only essential for very sticky samples and / or highly volatile solvents like hexane. They are also needed at syringe volumes above 25µl.

Merlin MicroSeal™ requires a 23 gauge needle with point style AS so that a proper seal is achieved during injection in the GC inlet.

X-Type Syringes from CTC Analytics

MicroLiter continues to support all aspects of the CTC Analytics PAL® Sample Handler. We are pleased to assist all customers with troubleshooting consumable issues and we encourage you to call us regarding any inquiry you may have. While we believe that there are some excellent alternatives to the CTC endorsed syringes, we have moved away from offering all product lines for syringes available for the PAL® and will focus our efforts on only the Hamilton products developed by CTC Analytics.

MicroLiter has long been a partner for consumables in the USA with LEAP Technologies and will continue to seek opportunities to grow with this dynamic innovator for sample handling solutions.

Our move to reduce our syringe offerings in no way reflects an overall change in our relationship with LEAP or how together we assist our mutual customers in finding solutions for their particular requirements.



Hamilton® Syringes for CTC Analytics Sample Handlers

CTC Analytics X-Type Syringes

Cat. No.	Retired Cat. No.	Description	Qty
XT-G2522S-3	L400.00060	25µL Syringe, 22s Gauge, Pt 3, Special Needle Coating	1
XT-G5022S-3	L400.00063	50µL Syringe FN, GT, PTFE, 22s Gauge Needle, Pt 3, Special Needle Coating	1
XT-G10022S-3	L400.00062	100µL Syringe FN, GT, PTFE, 22s Gauge Needle, Pt 3, Special Needle Coating	1
XT-G10022-3	L400.01062	100µL Syringe FN, GT, PTFE, 22 Gauge Needle, Pt 3, Special Needle Coating	1

Replacement Plungers

XT-PLGG25	—	Plunger for XT-G2522S-3	3 / Pk
XT-PLGG50	—	Plunger for XT-G5022S-3	3 / Pk
XT-PLGG100	L400.100P4-3	Plunger for XT-G10022S-3 & XT-G10022-3	3 / Pk

Dynamic Load & Wash (DLW) Syringe & Needles

Cat. No.	Description	Qty
DLW-100R	100µL Gastight® Syringe, Needle Not Included	1
DLW-NDL223	Needles, 22 Gauge Needle, Pt 3	3 / Pk
DLW-LOOP	Holding Loop Assembly Kit	1
DLW-FLWDIV	Flow Diverter	1
DLW-ASPKT	Aspiration Tube Kit, PFA Tube & 10µL Filter	1

Combi PAL® Headspace & Side-Port Syringes

Cat. No.	Retired Cat. No.	Description	Qty
HS-1.0235	L120.00041	1.0mL Gastight®, 23 Gauge Needle, Pt 5	1
HS-2.5235	L120.0004	2.5mL Gastight®, 23 Gauge Needle, Pt 5	1
HS-5.0235	L120.00052	5.0mL Gastight®, 23 Gauge Needle, Pt 5	1

HS-1.0265	L120.00042	HS500 Syringe 1.0mL 26 Gauge Needle, Pt 5	1
HS-2.5265	L120.00051	HS500 Syringe 2.5mL 26 Gauge Needle, Pt 5	1

Replacement Plungers

HS-PLG1.0	—	HD Plunger for HS-1.0235 Syringes	1
HS-PLG2.5	—	HD Plunger for HS-2.5235 Syringes	1
HS-PLG5.0	—	HD Plunger for HS-5.0235 Syringes	1

CTC Analytics C-Line Syringes

Cat. No.	Retired Cat. No.	Description	Approved for LC / GC	Qty
Fitted Stainless Steel Plunger, Fixed Needle				
CL-L1.226P-AS	L100.GCF1.2-6	1.2µL, 26 Gauge Needle, Pt ASGC Only	1	1
CL-L526S-AS	—	5.0µL, 26s Gauge Needle, Pt ASGC Only	1	1
CL-L1026S-2	L100.00041-6	10.0µL, 26s Gauge Needle, Pt 2GC Only	1	1
CL-L1026S-AS	L100.00050-6	10.0µL, 26s Gauge Needle, Pt ASGC Only	1	1

Gastight Plunger, Fixed Needle

CL-G1022S-3	L100.00064	10.0µL, 22s Gauge Needle, Pt 3 Both	1	1
CL-G2522S-3	L100.00060	25.0µL, 22s Gauge Needle, Pt 3 Both	1	1
CL-G2526S-AS	L100.00065	25.0µL, 26s Gauge Needle, Pt ASGC Only	1	1
CL-G10022S-3	L100.00062	100µL, 22s Gauge Needle, Pt 3 Both	1	1
CL-G10022-3	L100.00058	100µL, 22 Gauge Needle, Pt 3 LC Only	1	1
CL-G10026S-AS	L100.00047	100µL, 26s Gauge Needle, Pt ASGC Only	1	1
CL-G25022-3	L100.250FN3	250µL, 22 Gauge Needle, Pt 3 LC Only	1	1
CL-G25026-AS	—	250µL, 26s Gauge Needle, Pt ASGC Only	1	1
CL-G50022-3	—	500µL, 22 Gauge Needle, Pt 3 LC Only	1	1
CL-G50026-AS	L100.00043	500µL, 26s Gauge Needle, Pt ASGC Only	1	1
CL-G100022-3	L100.SYR1.0	1000µL, 22 Gauge Needle, Pt 3LC Only	1	1
CL-G250022-3	L100.SYR2.5-3	2500µL, 22 Gauge Needle, Pt 3LC Only	1	1

Replacement Plungers

Cat. No.	Retired Cat. No.	Volume	Gastight Replacement Plunger For:	Qty
CL-PLGG10	L100.GTPLG-10	10µL	CL-G1022S-3	10
CL-PLGG25	L100.25PH	25µL	CL-G2522S-3 & CL-G2526S-AS	10
CL-PLGG100	L100.100PH	100µL	CL-G10022S-3, CL-G10022-3 & CL-G10026S-AS	10
CL-PLGG250	L100.250P-3	250µL	CL-G25022-3 & CL-G50026S-AS	10
CL-PLGG500	—	500µL	CL-G50022-3 & CL-G50026S-AS	10
CL-PLGG1000-L	L120.0007	1000µL	CL-G100022-3	1
CL-PLGG2500	L120.0006	2500µL	CL-G250022-3	1

COMING SOON!

The Next
Generation of
Syringes for PAL®





Syringe Adapter Kits

Kits include Syringe Adapter, Plunger Holder and Two Syringes

Cat. No.	Retiring Cat. No.	Description	Qty
HTX, HTS PAL®, HTC PAL® & LC PAL® Sample Handlers			
C-Line Syringes			
CL-SYRLC10	LPAL.SA010	10µL w/ 22s, Pt 3	1
CL-SYRLC25	LPAL.SA025	25µL w/ 22s, Pt 3	1
CL-SYRLC100	LPAL.SA100	100µL w/ 22s, Pt 3	1
CL-SYRLC250	LPAL.SA250	250µL w/ 22, Pt 3	1
CL-SYRLC500	—	500µL w/ 22, Pt 3	1
CL-SYRLC1000	LPAL.SA1ML	1.0mL w/ 22, Pt 3	1
CL-SYRLC2500	LPAL.SA2.5ML	2.5mL w/ 22, Pt 3	1
CL-SYRLC5000	LPAL.SA5.0ML	5.0mL w/ 22, Pt 3	1
X-Type Syringes			
XT-SYRLC25	LPAL.SA025	25µL w/ 22s, Pt 3	1
XT-SYRLC50	LPAL.SA050	50µL w/ 22s, Pt 3	1
XT-SYRLC100	LPAL.SA100	100µL w/ 22s, Pt 3	1
XT-SYRLC100-22	LPAL.SA100	100µL w/ 22, Pt 3	1

Combi PAL® GC Liquid Sample Handlers

CL-SYRGC1.2	—	1.2µL w/ 26, Pt AS	1
CL-SYRGC5	—	5µL w/ 26s, Pt AS	1
CL-SYRGC10	LPAL.SA010	10µL w/ 26s, Pt AS	1
CL-SYRGC25	LPAL.SA025	25µL w/ 26s, Pt AS	1
CL-SYRGC100	LPAL.SA100	100µL w/ 26s, Pt AS	1
CL-SYRGC250	LPAL.SA250	250µL w/ 26, Pt AS	1
CL-SYRGC500	—	500µL w/ 26, Pt AS	1

Combi PAL® Headspace Sample Handlers

HS-SYR1.0ML	LPAL.HSA1	Adapter w/ Heater w/ 2 - 1.0mL 23, Pt 5 Syringes	1
HS-SYR2.5ML	LPAL.HSA2	Adapter w/ Heater w/ 2 - 2.5mL 23, Pt 5 Syringes	1
HS-SYR5.0ML	LPAL.HSA5	Adapter w/ Heater w/ 2 - 5.0mL 23, Pt 5 Syringes	1

Combi PAL Headspace Adapters & Agitator Accessories

Cat. No.	Retiring Cat. No.	Description	Qty
HS-SYHTKT	L120.SYHTKT	Retaining Nut and 4 O-Rings for 2.5mL	1
HS-SYHTKT1.0	L120.SYHTKT1.0	Retaining Nut and 4 O-Rings for 1.0mL	1
HS-SYHTKT5.0	L120.SYHTKT5.0	Retaining Nut and 4 O-Rings for 5.0mL	1
HS-INS2ML	LPAL.2MLVA	Agitator Inserts for 12 x 32mm Vials	6
HS-INS10ML	LPAL.AGIINSRTS10	Agitator Inserts for 22 x 46mm, 10mL Vials	6

Dynamic Load & Wash (DLW) Syringe Holder

Cat. No.	Description	Qty
DLW-HLDR-ZERO	DLW Syringe Holder Assembly w/ 100µL Syringe Tested for Zero Carry-Over	1
DLW-HLDR	DLW Syringe Holder Assembly w/ 100µL Syringe	1

Microplate & Vial Trays

Cat. No.	Description	Qty
LPAL.TR32	22mm Diameter Vial Tray, Holds 32 Vials	1
LPAL.TR54MT	11mm Crimp Tray, Same Footprint as Microplate, Holds 54 - 11mm Crimp, 12 x 32mm, 2.0mL	1
12-0000-VL	Vial Lock to Retain Vials During Elution Through Septum	1
LPAL.TR98	7 x 14 Tray (Reversible) Holds 98 - 12 x 32mm, 2.0mL or 78 - 7 x 40mm, 0.7mL	1

Microplate & Vial Tray Holders

Cat. No.	Description	Qty
LPAL.MTHLD	Standard Tray Holder for 2 Microplates or PAL.TR54MT	1
LPAL.TRHLD	Tray w/ 76mm Legs for 98 - 12 x 32mm Vials	1
LPAL.TRHDL	Tray for 4 Microplates	1
LPAL.TRHL	Tray Holder for 98 (12 x 32mm Vials) & 32 (22 x 75mm Vials) Position Trays	1
LPAL.3REHLDR	Holder for 3 - 100mL "Ink Well" Solvent Bottles	1

Needle Guide Accessories

Cat. No.	Description	Qty
LPAL.FOILCUT	Microplate Foil Cutting Device Attaches to Lower Needle Guide	1



LC Injection Valve Accessories

Cat. No.	Description	Qty
Rotors		
L100.10R	Rotor for 10-port Valve, Hastaloy	1
L100.10RE	Rotor for 10-port Valve, Valcon E Material	1
L100.LC26R	Rotor for 6-port Valve, Hastaloy	1
L100.LC26RE	Rotor for 6-port Valve, Valcon E Material	1
Accessories		
L100.1551A	Valve Needle Guide Screw	1
L100.LCTEF	PTFE Sleeves for Needle Guide	5 / Pk
LPAL.MV3012A	Valve Needle Guide Screw for HTS PAL® and LC-Mini PAL®	1

Solvent / Wash & Waste Supplies

Cat. No.	Description	Qty
Dynamic Load & Wash (DLW)		
DLW-TUBKT	DLW Tubing Kit	1
DLW-WASH	DLW Wash Station Block Complete Assembly	1
DLW-INS	DLW Wash Station Inserts	2 / Pk
HTS & HTS-xt, HTC & HTC-xt, HTX & HTX-xt PAL® Systems		
LPAL.100ML	100mL "Ink Well" Bottle for Reagents	1
LPAL.500MV	500mL Glass Solvent Bottle, 6mm Connector, New Style	1
LPAL.500ML	500mL Glass Solvent Bottle, 8mm Connector, Old Style	1
LPAL.1000ML	1L Glass Solvent Bottle, 8mm Connector	1
LPAL.22SLV	Glass Sleeves for Fast Wash Station	2 / Pk
LPAL.TUBKT	Tubing kit with Shut-Off Valve for Fast Wash Station 8mm OD Connector	1
LPAL.TUBKT-WV	Tubing Kit with Shut-Off Valve for Fast Wash Station 6mm OD Connector	1
Combi PAL®, Combi PAL-xt & A200-Series		
LPAL.0108	GC Autosampler Wash / Waste Bottle Set, 5 Vials (10mL), 5 Caps, 10 Septa	1
L100.0023	Septa Only	20 / Pk
L100.0118	Caps Only	10 / Pk
20-1000	Vials Only	100 / Pk

These Terms and Conditions of Sale (these "Terms") shall apply to all sales made by MicroLiter Analytical Systems (MLAS) and any of the affiliated companies and businesses of MLAS (collectively, "Seller") to you ("Buyer") until such time as you receive a revised edition of these Terms or other notice from Seller of their revocation. These Terms shall apply to all transactions between you and Seller until such further notice unless your written objections are received by Seller within thirty (30) days after you receive this document, which includes receipt of a website address by which these Terms can be accessed.

Additional or different terms, conditions, or instructions applicable to a particular sale may be specified in the body of a price quotation or sales acknowledgment from Seller or in an exhibit thereto, and, in the event of a conflict, shall take precedence over these Terms. Price and delivery terms applicable to a specific sale of goods or materials may be evidenced by Seller's internal customer order form maintained by Seller, which shall be controlling.

> Interpretation

Unless set forth in writing and signed by both Buyer and Seller no conditions, usage of trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain or supplement these Terms shall be binding and no modification shall be effected by the acknowledgement or acceptance of any Buyer purchase order or shipping instruction forms containing terms or conditions at variance with or in addition to these Terms.

> Price

Sales of goods and materials shall be at the price last quoted by Seller or at Seller's prevailing list price, if no price has been quoted. The price noted on Seller's internal customer order form maintained by Seller regarding specific orders shall be controlling.

> Delivery

Unless otherwise agreed in writing, all sales shall be F.O.B., Seller's plant, whereupon risk of loss is transferred to Buyer. Unless otherwise expressly agreed, Seller shall select the means of transportation and routing. Any specific delivery terms stated on Seller's internal customer order form maintained by Seller shall be controlling. All freight rates stated are those named by the carrier and are stated without responsibility. Buyer is responsible for all rate charges at actual rates in effect at time of shipment. All freight bills are to be paid by Buyer, unless otherwise agreed. Any prepaid charges are payable upon receipt of invoice. Carrier manifest weights taken on scale nearest the loading point shall govern all shipments.

> Acceptance

Except as otherwise provided herein, all goods delivered hereunder shall be conclusively deemed accepted unless, in accordance with Section 8, within thirty (30) days after the date of delivery (F.O.B., Seller's plant) of the goods, Seller receives written notice of rejection. Acceptance as aforesaid shall constitute acknowledgement of full performance by Seller of all of its obligations hereunder.

> Payment Terms

Unless otherwise specified in a quotation issued by Seller and/or Seller's invoice, payment for the goods sold hereunder shall be due in full within thirty (30) days net from the date of the invoice. Without prejudice to any other rights or remedies of Seller, Seller

shall have the right to charge interest without further notice on all overdue amounts at the rate of one and a half percent (1.5%) per month.

> Taxes

Any taxes that are or may be levied by the United States or any state or political subdivision thereof on goods or materials subject to any sales contract, or on the sale or purchase thereof, or on incidental transportation charges when the same are paid or required to be paid or collected by Seller shall be billed to and paid by Buyer.

> Warranties

Seller warrants that all goods and materials sold hereunder shall, at the time of shipment from Seller's plant, conform to Seller's specifications and quality criteria for such goods and materials as determined by Seller's test methods, which specifications, quality criteria and test methods are available upon request. Buyer's sole and exclusive remedy, and Seller's sole obligation, for breach of warranty shall be, at Seller's option, (a) the correction of the non-conforming condition or replacement of any nonconforming goods or materials or (b) the issuance of a credit to Buyer in the amount of the purchase price paid and received for such goods. Buyer shall notify Seller of any claim of for breach of the foregoing warranties within ten (10) days after Buyer's discovery of such defect. Before any claim for breach of warranty will be honored, Seller must be given an opportunity, after receiving notice of Buyer's claim, to inspect the goods or materials claimed to be nonconforming. In no event shall any claim for a breach of warranty be made later than six (6) months after the date of delivery of the goods and materials.

SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING MATERIALS OR GOODS SUPPLIED UNDER THESE TERMS OR ANY CONTRACT TO WHICH THEY APPLY, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN UNDER THIS SECTION ARE EXCLUSIVELY IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO DEFECTS IN OR NONCONFORMITY OF GOODS OR MATERIALS RESULTING FROM DESIGNS OR SPECIFICATIONS PROVIDED BY BUYER. TECHNICAL ADVICE IS FURNISHED AS AN ACCOMMODATION TO BUYER. SELLER ASSUMES NO LIABILITY FOR TECHNICAL ADVICE AND BUYER ACCEPTS SUCH ADVICE AT BUYER'S SOLE RISK.

> Limitations on Claims

All claims, except for claims for breach of warranty under Section 7, must be made within thirty (30) days after delivery of the goods or materials and failure to do so shall constitute a waiver by Buyer of any such claims. Claims for any damages to goods or materials in transit shall be made against the carrier. Any action for breach of any sales contract to which these Terms apply must be commenced within six (6) months after the cause of action has accrued.

> Limit of Liability

SELLER'S TOTAL LIABILITY TO BUYER (REGARDLESS OF THE NATURE OF THE CLAIM) SHALL BE LIMITED TO THE TOTAL PURCHASE PRICE OF THE RELEVANT GOODS ACTUALLY PAID BY BUYER. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF PROFITS.

> Security Interest

Seller retains a security interest in all goods and materials delivered hereunder and all proceeds and products thereof until all amounts due or to become due hereunder have been paid. Any repossession and removal of goods or materials shall be without prejudice to any of Seller's other remedies at law or in equity. Buyer agrees, without further consideration, at any time to do or cause to be done, executed and delivered all such further acts and instruments (including without limitation financing statements appropriate for filing) as Seller may reasonably request in order to protect Seller's security interest.

> Buyer's Condition

These Terms and all shipments made hereunder shall be at all times subject to the approval by Seller of Buyer's financial condition. If the financial condition of Buyer at any time becomes unsatisfactory to Seller or if Buyer fails to make any payment when due, in addition to any other rights Seller may have, Seller may defer or decline to make any shipment or shipments hereunder or may condition such shipment upon receipt of satisfactory security or cash payments in advance. Seller reserves the right, upon written notice to Buyer, to cancel any order made under these Terms, without liability, in the event of any of the following: insolvency of Buyer, the filing of a voluntary petition in bankruptcy by Buyer, the filing of an involuntary petition to have Buyer declared bankrupt, the appointment of a receiver or trustee for Buyer, the execution by Buyer of an assignment for the benefit of creditors, the discontinuance of business by Buyer or the sale by Buyer of the bulk of its assets other than in the usual course of business.

> Cancellation and Returns

These Terms and any order made hereunder are not subject to cancellation by Buyer and goods and materials delivered and accepted hereunder are not subject to return or refund, except upon (a) written approval of Seller and (b) the payment to Seller of a fair and equitable cancellation or return charge based upon every loss, cost or damage that Seller may suffer as a result plus a reasonable allowance for profit.

> Assignment

These Terms and all contracts or orders governed by these Terms shall be binding upon, and inure to the benefit of, Buyer and Seller and their respective representatives, successors and assigns. Notwithstanding the foregoing, Buyer shall not assign its rights and obligations under these Terms, or any contract or order governed by these Terms, without Seller's prior written consent. In the event of an assignment without Seller's prior consent, upon written notice to Buyer, Seller shall have the right to make unilateral adjustments to the payment terms hereunder, including without limitation, requiring cash in advance for deliveries or the posting of additional security.

> Force Majeure

Seller shall not be responsible for any nonperformance or delay in performance as a result of any cause beyond its control, including without limitation, strikes, labor disputes, accidents, breakdowns, inability to secure transportation or materials, fires, floods, weather conditions, delays in transportation or the inability to obtain, at reasonable prices, utilities, raw materials or operating equipment and machinery.

> Applicable Law

All contracts governed by these terms and conditions shall be governed by and construed according to the substantive laws of the State of New Jersey. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Contract. All disputes arising hereunder shall be resolved in a court of competent jurisdiction in the State of New Jersey. Buyer hereby consents to the jurisdiction of the state and federal courts sitting in the State of New Jersey and waives any claim that a proceeding brought in such courts has been brought in an inconvenient forum.

> Notices

Any notice, direction or other information required or permitted to be given by either party under these Terms shall be deemed to have been validly given if served to the party in writing via e-mail, fax or via postal service.

> Severability / Headings

If any provision of these terms and conditions or any resulting sales document are found by a court of competent jurisdiction to be prohibited or unenforceable, it shall be ineffective only to the extent of such prohibition or unenforceability, and such prohibition or unenforceability shall not invalidate the balance of such provision to the extent it is not prohibited or unenforceable, nor shall it invalidate the other provisions hereof, all of which shall be liberally construed in favor of Seller in order to effect the provisions hereof. The paragraph headings hereof have been inserted for the convenience of the parties and shall not be considered in the interpretation or construction of these Terms.

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Note: DWK reserves the right to make specification changes to its catalog products without notification. As a result of continual improvements to the design of our products or manufacturing techniques, purchasers may notice that items ordered and received may differ from the description and / or photograph of that product appearing on a website or in a catalog.

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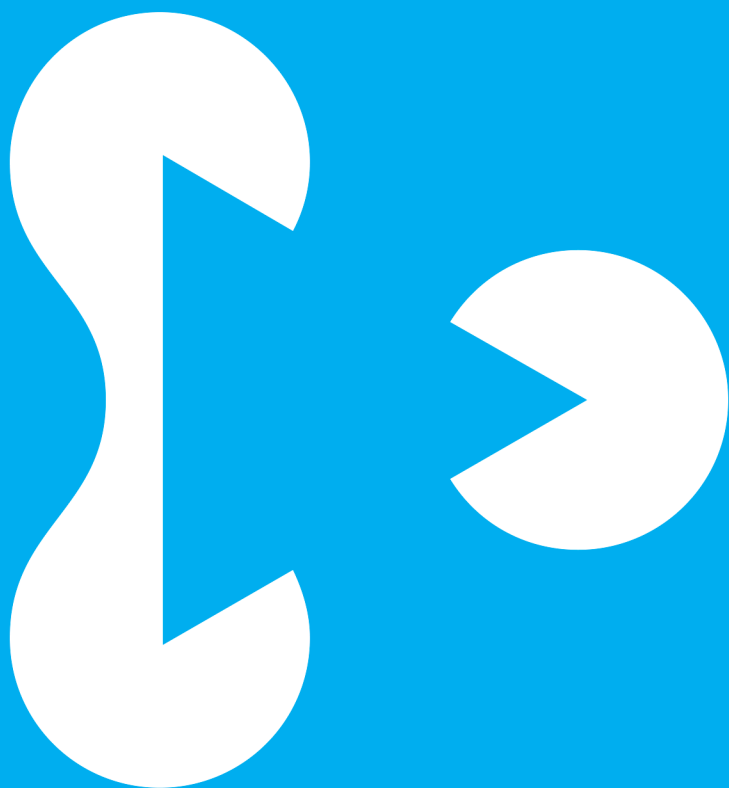
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