

AGILENT CERTIFIED VIALS



Guaranteed fit
Superior consistency
More options,
more productivity,
more confidence

The Measure of Confidence



Agilent Technologies



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ALL VIALS ARE NOT CREATED EQUAL



Common questions about Agilent vials and caps

Why is it important to use Agilent Certified vials on my Agilent autosampler?

Agilent Certified vials are the only vials in the industry designed and tested for full compatibility with our autosamplers. The same attention and precision that go into designing our instruments, columns, and parts also go into designing these vials. Many Agilent autosamplers use a robotic arm to grip vials by the neck. Therefore, it is critical that the vial neck and shoulder are the proper height to prevent dropped vials and lost samples. Only Agilent Certified vials are designed for use on Agilent autosamplers; competitor products simply do not meet our exact specifications, which can lead to costly instrument downtime and potential loss of your precious samples.

Is the same true for Agilent Certified caps and inserts?

To avoid leakage and sample loss due to evaporation, inserts must sit neatly in the vial – and the entire assembly must be tightly sealed when capped. You should also consider the depth of your autosampler needle when using an insert to prevent needle damage and ensure proper sample uptake.

The threads on the Agilent Certified screw vials are designed precisely to match the threads on Agilent Certified caps. Using a non-Agilent Certified cap on these vials will not create a secure, tight seal and will lead to sample loss. In addition, Certified crimp vials and caps are tested over 100,000 times on our Agilent autosamplers to confirm a proper fit and secure seal.



Tips & Tools

An Interactive Vial Selection Tool is also available. For more information, visit www.agilent.com/chem/SelectVials

www.agilent.com/chem/CertifiedVials

Do I need to be concerned about the compatibility of my sample with my vials?

For highly sensitive samples such as pesticides or semivolatiles, as well as samples that are prone to sudden shifts in pH, deactivated vials are best, because their surface is more hydrophobic and inert. For more exacting, demanding applications, such as mass spectrometry, deactivated vials are recommended to prevent sample interactions prior to analysis.

Polypropylene vials are an excellent choice for biological applications and for applications involving samples with high metal content, such as ion chromatography, AA, or ICP-MS. Agilent thoroughly tested and evaluated a variety of polypropylene materials prior to selecting the grade used in our polypropylene vials. Our polypropylene vials have the lowest levels of extractables to ensure integrity of your sample.

Can I count on consistency from one vial to the next?

Autosampler vials can vary from their stated size and wall weight if tolerances are not tightly controlled. This can affect the volume of sample in the vial, which is especially problematic when working with small amounts of sample. Our tight control of tolerances extends through the entire manufacturing process, from the initial design to the final opto-electronic screening process, which inspects every single vial and cap for accuracy.

Agilent Certified vials conform to the industry's tightest tolerances to ensure consistency from lot to lot, as well as from one vial to the next.





Why should I buy my vials from Agilent?

Vial integrity, cleanliness and consistency are critical for today's demanding applications. That is why Agilent vials and caps are designed using the same engineering expertise that is built into Agilent instruments. All Agilent Certified vials are manufactured in ISO 9001 clean environments, must pass a 33-point visual inspection, and are uniquely packaged to stay clean and secure during shipment.

Why It Is Critical to Use Agilent Certified Vials and Closures on Agilent Autosamplers

Common Problems	Effects	Benefits of Agilent Certified Vials and Caps
Inconsistency with vial bottom thickness	<ul style="list-style-type: none"> • Sample draw inconsistency • Damaged needle 	Consistent and valid relative standard deviation (RSD) values
Autosampler sequence interruption	<ul style="list-style-type: none"> • Mishandled or dropped vials • Loss of precious sample 	Confidence in unattended operation
Undetected improper seal	<ul style="list-style-type: none"> • Sample loss/evaporation • Possible sample contamination 	Proper sealing for accurate results
Dislodged or misaligned septa	<ul style="list-style-type: none"> • Sample loss • Sample contamination 	Accurate results
Ghost peaks	<ul style="list-style-type: none"> • Contamination by cap septa 	Chromatographic purity test that eliminates outliers and analysis errors



Tips & Tools

Agilent thoroughly tests each vial and insert to determine our recommended fill volumes. Never fill vials to the top; always consider the recommended fill volume.

www.agilent.com/chem/CertifiedVials



Protect sample integrity by choosing the right septa for your application

Proper septa selection is critical to preventing contamination and avoiding damage to the needle and instrument. Here are some questions you should ask:

Are the septa chemically compatible with your samples and solvents?

The chart below summarizes chemical compatibility and incompatibility. Agilent provides this septa compatibility as a guide and a starting reference point. We realize that chemical compatibility can vary depending on the concentration of the solvent, the temperature, the molecular weight of the solvent, and other factors. Therefore it is always recommended you try a variety of septa to determine the best one for your analysis.

Septa Chemical Compatibility						
	PTFE	PTFE/Silicone	PTFE/Silicone/PTFE*	PTFE/Red Rubber	Viton	PTFE/Butyl
Acetonitrile	◆	◆	◆	◆		◆
Hydrocarbons (hexane, heptane, methane)	◆		◆	◆	◆	
Methanol	◆	◆	◆	◆		◆
Benzene	◆		◆		◆	
THF	◆		◆			
Toluene	◆		◆			
DMF	◆	◆	◆			◆
DMSO	◆	◆	◆			◆
Ether	◆	◆	◆			
Chlorinated Solvents (methylene chloride)	◆		◆		◆	
Alcohols (ethanol)	◆	◆	◆	◆	◆	◆
Acetic Acid	◆	◆	◆			◆
Acetone	◆	◆	◆			
Phenol	◆	◆	◆		◆	◆
Cyclohexane	◆		◆	◆	◆	

*PTFE/silicone/ PTFE has the same chemical compatibility of PTFE ONLY UNTIL PUNCTURED.

Will my application require repeat injections from the same vial or storage of the sample?

Resealability is an important factor to consider when selecting septa. PTFE/red rubber septa are not recommended for multiple injections or for samples that need to be stored for further analysis. When applications require a longer time between injections or any type of standard additions, PTFE/silicone/PTFE septa are always best.

What force is required to penetrate the septa?

Generally, silicone septa are more easily pierced than red rubber or butyl septa. For thicker, hard-to-pierce septa, a small gauge (23 gauge) needle may be required. Or an S-needle as they are stronger.

Pre-slit septa are the best option for the easiest penetration and will reduce the likelihood of coring.

All Agilent Certified septa are designed for optimal use with Agilent autosamplers and for proper fit in the caps.

Cap and Septa Compatibility							
	High Performance Septa	Thin PTFE	PTFE/Silicone*	PTFE/Silicone /PTFE*	PTFE/Red Rubber	Viton	Butyl
Temperature range	40 to 300 °C	Up to 260 °C	-40 °C to 200 °C	-40 °C to 200 °C	-40 °C to 90 °C	-40 °C to 260 °C	-50 °C to 150 °C
Use for multiple injections	No	No	Yes	Yes	No	No	No
Price	Most expensive	Very economical	Economical	Most expensive	Very economical	Economical	Economical
Resistance to coring	Excellent	None	Excellent	Excellent	None	None	None
Recommended for storage	No	No	Yes	Yes	No	No	No
Best for	High temperature headspace applications	Superior chemical inertness, short cycle times, and single injections	Most common HPLC and GC analyses, not as resistant to coring as P/S/P	Superior performance for ultra trace analysis, repeat injections, internal standards	Chlorosilanes, more economical option for single injections	Chlorinated solvents, higher temperatures	Organic solvents, acetic acids; impermeable to gasses

*Agilent silicone is platinum cured (versus peroxide cured), making it more inert and less likely to interact with samples



Tips & Tools

For highly sensitive samples, we recommend PTFE-lined ("sandwiched") septa, because the PTFE layers act as a chemically resistant barrier.



PTFE-lined solid top screw caps for 2 mL vials, 5183-2075

www.agilent.com/chem/CertifiedVials



What temperature range does my application require?

Septa can degrade at higher temperatures, causing contamination of your samples. Red rubber septa are only stable up to 90 °C and therefore are not a good option for higher temperature applications. Generally, PTFE-lined silicone septa provide the best compatibility with a wide range of temperatures.

For newer headspace applications that require temperatures from 150 °C to 300 °C, Agilent offers the new High Performance Septa, made of special proprietary materials that will not degrade at extreme temperatures. See page 20 for more information.

How do I avoid common issues caused by septa?

Coring

Coring occurs when the needle diameter is too large for the septa or when the septa material is not durable enough to withstand repeat injections. When this happens, septa material can flake off into the vial and contaminate the sample. Here is how to prevent coring:

- Choose a PTFE-lined septum to prevent septa material from entering the sample
- Make sure the needle is not damaged, and consider a side-entry needle instead of a conical needle
- Use pre-slit septa, which will virtually eliminate coring

Vacuum Generation

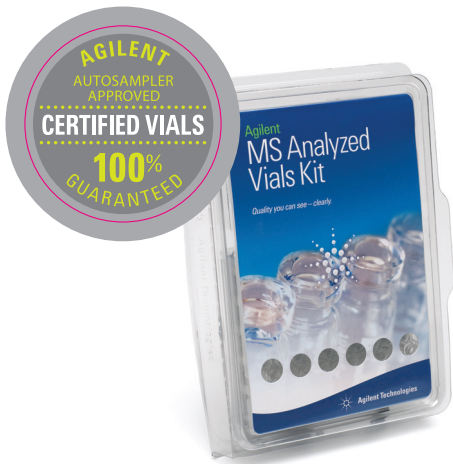
Sometimes withdrawing volume from a sealed vial can create a vacuum. A few simple steps can prevent this from happening:

- Use pre-slit septa to help equalize the pressure on both sides of the cap
- Do not overfill vials
- Do not take more than 50 μ L (from a 2 mL vial) in one injection



Tips & Tools

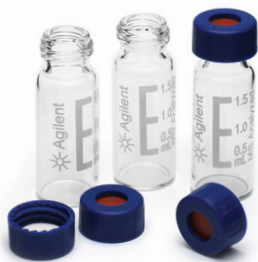
Septa that are too thick can prevent the cap from fitting properly on the vial. Agilent Certified septa are designed for use in our Certified caps.



MS Analyzed Vial Kits

Agilent MS Analyzed Vial Kits end the need to pre-test or to re-run samples due to unexpected peaks. All MS Analyzed Vials Kits include a Certificate of Analysis that contains accurate, lot-specific, and fully traceable LC/MS and GC/MS signal traces, as well as critical physical dimensions. Agilent's new MS Analyzed Vial Kits provide lot-specific test results for greater confidence in your results.

- All vials are lot-tested by both GC/MS and LC/MS using Agilent systems
- Manufactured for full-warranted compatibility with Agilent GC and LC autosamplers
- Packaged in a unique box designed to reduce vial breakage
- Packed in a clean environment using clean packaging to reduce contamination
- Available in both crimp top and screw top closures
- Larger write-on spots for easier labeling and identification
- Conveniently packaged in a combination pack with 100 vials and 100 caps/septa



Screw top MS analyzed vial kit, 5190-2277



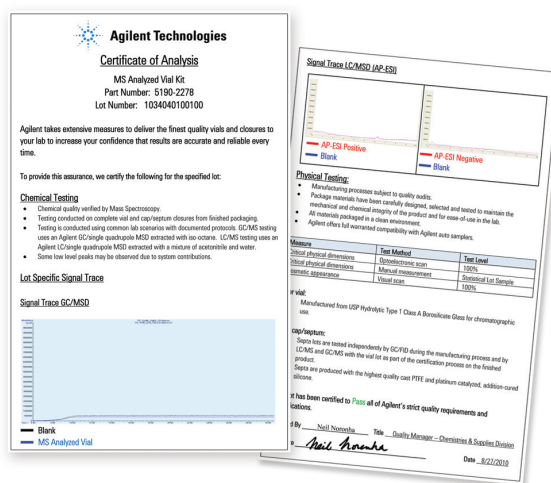
Screw top MS analyzed vial kit, 5190-2280



Crimp top MS analyzed vial kit, 5190-2282

MS Analyzed Vial Kits

Vial Type	Septa Type	Cap Color	Unit	Part No.
Screw Top MS Analyzed Vial Kits				
Clear	PTFE/red silicone septa	Blue	100/pk	5190-2277
Clear with write-on spot	PTFE/red silicone septa	Blue	100/pk	5190-2278
Amber	PTFE/red silicone septa	Blue	100/pk	5190-2279
Amber with write-on spot	PTFE/red silicone septa	Blue	100/pk	5190-2280
Crimp Top MS Analyzed Vial Kits				
Clear	PTFE/white silicone septa	Silver aluminum	100/pk	5190-2281
Clear with write-on spot	PTFE/white silicone septa	Silver aluminum	100/pk	5190-2282
Amber	PTFE/white silicone septa	Silver aluminum	100/pk	5190-2283



Certificate of Analysis signed by Agilent's Quality Manager

www.agilent.com/chem/CertifiedVials



Certified Screw Top Vials and Closures

Combine the excellent autosampler handling of a crimp cap profile with the ease of a screw cap. The screw caps and precision fit septa give a secure seal with microvolume inserts.



2 mL wide opening screw top glass vials, 5183-2067



2 mL wide opening screw top glass vials with write-on spot, 5182-0715



2 mL wide opening screw top glass vials with write-on spot, 5182-0716

- Certified for full warranted compatibility with Agilent autosamplers
- 2 mL, 12 x 32 mm, 9 mm diameter
- Packaged in a unique box designed to reduce vial breakage
- 40% larger opening than standard narrow opening vials
- Unique thread design for consistently secure seal
- Precision-formed neck for optimal robotic arm handling
- Rigorous quality assurance for dimensional consistency from lot-to-lot
- Optional ceramic write-on spot with fill marks

2 mL Wide Opening Screw Top Glass Vials

Description	100/pk	1000/cs*
Clear	5182-0714	5183-2067
Clear, write-on spot	5182-0715	5183-2068
Amber	5188-6535	5188-6536
Amber, write-on spot	5182-0716	5183-2069
Deactivated Vials		
Clear	5183-2070	
Clear, write-on spot	5183-2071	
Amber, write-on spot	5183-2072	

*Case includes 10 packs of 100 vials

Screw Caps for 2 mL Vials

Color	Septa Type	100/pk	500/pk	1000/pk
Blue	PTFE/red silicone septa	5182-0717	5185-5820	5190-1599
	PTFE/white silicone septa	5182-0720	5185-5863	
	PTFE/silicone/PTFE septa	5182-0723	5185-5862	
	Pre-slit PTFE/silicone septa	5183-2076	5185-5865	
	PTFE-lined solid top	5183-2075		
	Open top, no septa	5182-0728		
Green	PTFE/red silicone septa	5182-0718	5185-5829	
	PTFE/white silicone septa	5182-0721	5185-5864	
	PTFE/silicone/PTFE septa	5182-0724	5185-5861	
	Pre-slit PTFE/silicone septa	5183-2077		
	Open top, no septa	5182-0727		
Red	PTFE/red silicone septa	5182-0719		
	PTFE/white silicone septa	5182-0722		
	PTFE/silicone/PTFE septa	5182-0725		
	Pre-slit PTFE/silicone septa	5183-2078		
	Open top, no septa	5182-0726		
Black	PTFE/red silicone septa	5185-5838		
Purple	PTFE/silicone septa	5040-4681		
Light turquoise	PTFE/silicone septa	5040-4683		



PTFE-lined solid top screw caps for 2 mL vials, 5183-2075



Screw Cap Pack for 7696 Sample Prep Workbench

Description	Septa Type	Part No.
Multicolor screw cap pack Includes 50/pk of each color: blue, green, red, light turquoise, purple	PTFE/silicone septa	5040-4682

Septa for Wide Opening Screw Caps

Septa Type	Color	Unit	Part No.
PTFE/red silicone	Ivory	100/pk	5182-0731
PTFE/white silicone/red PTFE	Red	100/pk	5182-0729
Pre-slit PTFE/white silicone	Blue	100/pk	5183-2074
PTFE/white silicone	Red	100/pk	5182-0730



PTFE/red silicone septa for wide opening screw caps, 5182-0731



PTFE/red silicone septa for wide opening screw caps, 5182-0729



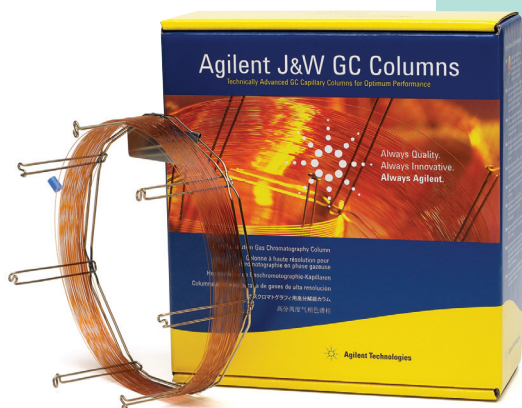
Pre-assembled vial pack

2 mL Screw Top Vial Packs

Pre-assembled packs come ready-to-use with the cap and septum of your choice attached to the vial. A time- and labor-saving product for use with your Agilent autosampler or any rotating tray automatic sampler. **Note:** Review the Septum Selection Guide to choose the septum best suited for your application.

2 mL Screw Top Vial Packs

Vial Type	Septa Type	Cap Color	Unit	Part No.
Clear	PTFE/red silicone septa	Blue	100/pk	5182-0553
Clear with write-on spot	PTFE/red silicone septa	Blue	100/pk	5182-0864
Amber with write-on spot	PTFE/red silicone septa	Green	100/pk	5182-0554
Clear	PTFE/silicone/PTFE septa	Blue	100/pk	5182-0555
Clear with write-on spot	PTFE/silicone/PTFE septa	Blue	100/pk	5182-0866
Amber with write-on spot	PTFE/silicone/PTFE septa	Green	100/pk	5182-0556
Clear	PTFE/silicone septa	Blue	100/pk	5182-0557
Clear with write-on spot	PTFE/silicone septa	Blue	100/pk	5182-0865
Amber with write-on spot	PTFE/silicone septa	Green	100/pk	5182-0558
Clear	Pre-slit PTFE/silicone septa	Blue	100/pk	5183-2082
Clear with write-on spot	Pre-slit PTFE/silicone septa	Blue	100/pk	5183-2083



Put 40 years of Agilent quality and innovation behind your every separation. With over 4000 columns, Agilent J&W offers the broadest portfolio of the most innovative GC columns in the world. Our portfolio offers the best inertness for acids/bases/mixed functional compounds, the lowest bleed levels and the tightest column-to-column reproducibility. So when you put industry-leading Agilent J&W GC columns to work in your lab, you can have the utmost confidence in your column, and in every separation.



Screw Top Vial Convenience Packs

Convenience packs are an easy way to get 500 of each component using one part number. Packed in our six-drawer, reusable blue plastic cabinet, 500 vials and caps with septa installed are kept handy and dust-free. **Note:** Review the Septum Selection Guide to choose the septum best suited for your application.



Screw top vial convenience pack

Screw Top Vial Convenience Packs

Vial Type	Septa Type	Cap Color	Unit	Part No.
Clear	PTFE/red silicone septa	Blue	500/pk	5182-0732
Clear with write-on spot	PTFE/red silicone septa	Blue	500/pk	5182-0867
Amber with write-on spot	PTFE/red silicone septa	Green	500/pk	5182-0733
Clear	PTFE/silicone/PTFE septa	Blue	500/pk	5182-0736
Clear with write-on spot	PTFE/silicone/PTFE septa	Blue	500/pk	5182-0869
Amber with write-on spot	PTFE/silicone/PTFE septa	Green	500/pk	5182-0737
Clear	PTFE/silicone septa	Blue	500/pk	5182-0734
Clear with write-on spot	PTFE/silicone septa	Blue	500/pk	5182-0868
Amber with write-on spot	PTFE/silicone septa	Green	500/pk	5182-0735
Clear	Pre-slit PTFE/silicone septa	Blue	500/pk	5183-2079
Clear with write-on spot	Pre-slit PTFE/silicone septa	Blue	500/pk	5183-2080
Amber with write-on spot	Pre-slit PTFE/silicone septa	Green	500/pk	5183-2081
Clear	Bonded, pre-slit PTFE/silicone septa	Blue	500/pk	5067-0205



Certified Crimp Top Vials and Closures

The wide opening crimp cap provides a larger target area for improved autosampler needle accuracy. Select from five cap colors and a variety of septa. Whatever your crimp top vial needs, Agilent has what you are looking for.

- Certified for full warranted compatibility with Agilent autosamplers
- 2 mL, 12 x 32 mm
- Available in unique packaging designed to reduce vial breakage
- Tightly controlled crown for improved crimping
- Precision-formed neck for improved autosampler handling
- Rigorous quality assurance provides dimensional consistency from lot-to-lot
- Optional ceramic write-on spot with fill marks



Clear crimp top vials, 5181-3375

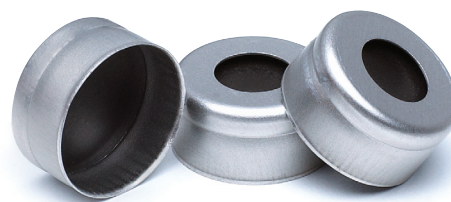
2 mL Wide Opening Crimp Top Glass Vials

Description	100/pk	1000/cs*
Clear	5181-3375	5183-4491
Clear, write-on spot	5182-0543	5183-4492
Amber, write-on spot	5181-3376	5183-4493
Deactivated Vials		
Clear	5183-4494	
Clear, write-on spot	5183-4495	
Amber, write-on spot	5183-4496	

*Case includes 10 packs of 100 vials

Crimp Caps with 11 mm Septa

Agilent recommends using Certified crimp caps with PTFE/silicone septa to ensure seamless operation with your Agilent autosampler. Agilent Certified crimp caps are guaranteed to work with your instrument to reduce autosampler malfunctioning and contamination.



Silver aluminum crimp caps with black Viton septa, 5181-1212

Crimp Caps with 11 mm Septa

Cap Color	Septa Type	100/pk	1000/pk
Silver aluminum	PTFE/silicone/PTFE septa	5181-1211	5183-4499
	PTFE/silicone septa	5182-0552	5183-4500
	Black Viton septa	5181-1212	
	Thin PTFE septa	5182-0871	



Tips & Tools

The electronic crimper is easily adjusted to deliver consistent crimping performance. Tight seals and high-quality cap form minimize sample loss and help provide smooth autosampler performance. For best results, vials and seals should be sized consistently. We recommend Agilent Certified autosampler vials, caps, and seals for use with the electronic crimper. See page 22 for more information.



Electronic Crimping and Decapping Tool – operation for adjustments



Certified Microvolume Inserts for Wide Opening Vials

To meet your microsampling needs, Agilent has a variety of microvolume inserts with capacities and designs that can transform our vials from full-capacity to limited volume with one simple step. Microvolume inserts are certified to work with all Certified vials for excellent fit with Agilent autosamplers.



250 µL pulled-point glass inserts, 5183-2085



400 µL glass flat bottom inserts, 5181-3377

Certified Microvolume Inserts for Wide Opening Vials

Description	Maximum Fill Volume	Recommended Fill Volume	Unit	Part No.
Conical Inserts with Polymer Feet				
Glass inserts with polymer feet and mandrel interior	350 µL	250 µL	100/pk	5181-1270*
Deactivated glass inserts with polymer feet and mandrel interior	320 µL	250 µL	100/pk	5181-8872
Conical Glass Inserts				
Pulled-point glass inserts	350 µL	250 µL	100/pk	5183-2085
Flat Bottom Inserts				
Glass flat bottom inserts	440 µL	400 µL	500/pk	5181-3377
Deactivated glass flat bottom inserts	440 µL	400 µL	500/pk	5183-2086
Narrow neck inserts	180 µL	100 µL	500/pk	9301-1387

*For vortexing or mixing small volume samples, Agilent recommends using 5181-1270 because it provides a secure seal with the cap and septum



When should I use a Polypropylene Vial?

The information provided below will help you to determine if polypropylene vials or silanized glass vials are the best option for your application. As always, this information serves only as a guideline, and we always recommend testing options before deciding on the proper vial and cap.

Polypropylene

- Traditionally the material of choice for LC or LC/MS and CE
- Polypropylene can oxidize some biologicals
- Not recommended for light sensitive compounds
- Not compatible with a number of organic solvents
- Max temperature of ~ 175 °C

Deactivated/Silanized Vials

- Deactivation process renders surface inert
- Will not interact with metals, biologicals or proteins and will not cause shifts in pH of sample
- Compatible with a wide variety of solvents
- Available in amber for light sensitive samples
- More expensive than polypropylene
- Can withstand temperatures up to 500 °C

Available Sizes/Formats

Polypropylene Vials

250 µL	Crimp & Screw
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Deactivated/Silanized Vials

2 mL	Crimp, Snap & Screw
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250 µL, 400 µL	Microvolume Inserts
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www.agilent.com/chem/CertifiedVials



Polypropylene screw top vials, 5190-2242



Crimp/Snap top polypropylene vial, 250 µL, 5188-2788

Polypropylene Vials

Wide opening 12 x 32 mm vials are manufactured from virgin polypropylene, meeting the requirements of 21 CFR 177.1520. Polypropylene is chemically resistant and the material of choice for sodium or heavy metals analysis. Polypropylene vials are translucent and can be used with crimp caps.

Agilent's polypropylene vials have recently been improved. We now use the purest, cleanest grade of polypropylene available, to guarantee the lowest levels of extractables. In addition, the walls of these vials have been thickened to withstand the force of Agilent LC and CE autosamplers. Competitor vials are not comparable.

Polypropylene Vials

Vial Type	Volume	100/pk	1000/pk
Polypropylene, crimp/snap top	250 µL	5188-2788	9301-0978
Polypropylene, screw top	250 µL	5190-2242	5190-2243

Agilent Polypropylene Vial Compatibility

Contact Time	Extraction (<5 min)	< 1 hr	1 - 4 hr	4 - 8 hr	24 hr
Hexane	Good	Fair	Not recommended	Not recommended	Not recommended
THF	Good	Fair	Not recommended	Not recommended	Not recommended
MeCl ₂	Good	Fair	Not recommended	Not recommended	Not recommended
Toluene	Good	Fair	Not recommended	Not recommended	Not recommended
Isooctane	Good	Good	Fair	Fair	Not recommended
Acetone	Good	Good	Good	Fair	Not recommended
Ethyl acetate	Good	Good	Good	Fair	Fair
IPA	Good	Good	Good	Good	Good
Ethanol	Good	Good	Good	Good	Good
Methanol	Good	Good	Good	Good	Good
DMSO	Good	Good	Good	Good	Good
Acetonitrile	Good	Good	Good	Good	Good



LC Vials and Closures

Agilent Technologies offers a variety of vials for Agilent's LC instruments. Choose from small volume vials, 5 mL, and 6 mL vials.



LC Vials and Closures

Description	Unit	Part No.
6 mL Screw Top Vials and Closures		
Clear, flat bottom	100/pk	9301-1377
Screw caps, 16 mm	100/pk	9301-1379
PTFE/silicone septa	100/pk	9301-1378
PTFE/silicone septa, pre-slit	100/pk	5188-2758
5 mL Screw Top Vials		
Clear, high recovery	30/pk	5188-5369



Tips & Tools

6 mL high recovery screw top vials are recommended for G2258 Dual Loop and G1367 Well Plate Autosamplers only. 5 mL high recovery screw top vials can be used with all autosamplers.

www.agilent.com/chem/CertifiedVials



Headspace Vials and Closures

Beveled-neck headspace vials are available in both 10 mL and 20 mL capacities, flat or rounded bottom. The 20 mm crimp caps provide a consistently secure seal. Agilent also offers cost-saving convenience packs with vials, caps and septa packaged together.

- Certified for full warranted compatibility with Agilent autosamplers
- Choice of crimp or screw top vials
- Beveled top for maximum secure seal
- Two neck lengths available
- Choice of a pressure safety release cap at 45 psi
- Available in flat or rounded bottom designs



Tips & Tools

Are you confident in the quality of your septa? Demanding headspace applications require Agilent High Performance Septa. See page 20 for details.





Amber headspace crimp top vials with graduation marks and write-on spot, 5190-2288

Headspace Crimp Top Vials

Vial Size	Vial Type	Unit	Flat Bottom	Rounded Bottom
20 mL, 23 x 75 mm	Clear	100/pk	5182-0837	5183-4474
	Amber	100/pk	5067-0226	5190-2239
10 mL, 23 x 46 mm	Clear	100/pk	5182-0838	5183-4475
	Amber	100/pk	5067-0227	5190-2238
With Graduation Marks and Write-on Spot				
20 mL, 23 x 75 mm	Clear	100/pk	5190-2286	
	Amber	100/pk	5190-2288	
10 mL, 23 x 46 mm	Clear	100/pk	5190-2285	
	Amber	100/pk	5190-2287	



Clear headspace crimp top vials with graduation marks and write-on spot, 5190-2285



Tips & Tools

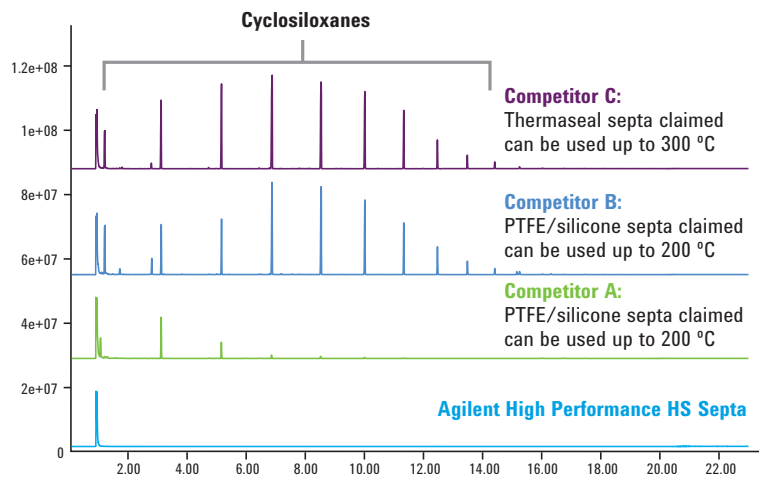
The Agilent headspace autosamplers G1888A, and 7694A, B and E are compatible with the flat bottom headspace vials only. Only Agilent vials are designed to properly fit in the Agilent autosampler incubator.

NEW! High Performance Septa

Agilent introduces the first septa that can withstand extreme temperatures and conditions for today's demanding headspace applications.

- Proven to withstand temperatures up to 300 °C with no degradation
- Leakproof
- Available in your choice of crimp or screw

Headspace screw top vial blank chromatogram comparison at 300 °C with different septa



GC/MS conditions

Inlet: Split mode w/ 10:1 ratio, 250 °C

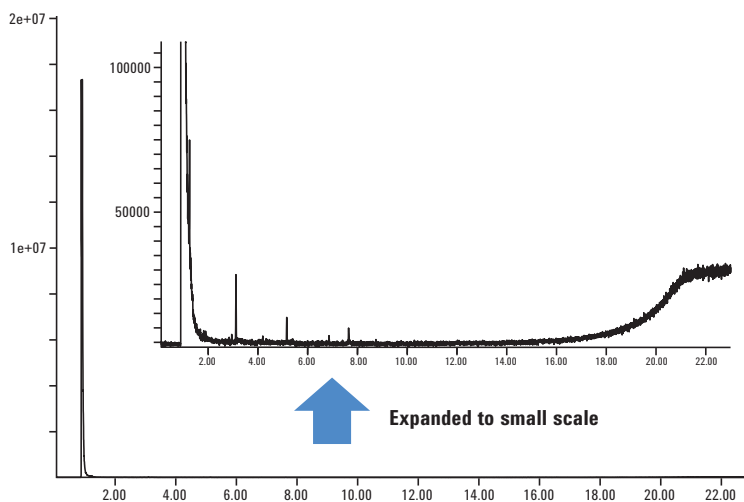
Column: DB-5MSUI, 30 m x 0.25 mm x 0.25 µm, Constant flow: 2.5 mL/min

Oven: 40 °C hold 1.5 min, then 15 °C/min to 325 °C and hold for 2.5 min, 23 min total run time

Thermal Aux/MS source/MS guard: 250 °C/230 °C/150 °C

MSD: Scan mode 25 - 550 m/z

Vial blank sample chromatogram at 300 °C with Agilent High Performance HS Septa



Headspace conditions

Septa Type: Agilent High Performance Septa, 5190-3986

Temperature: Oven/loop & valve/transfer line: 300 °C/300 °C/300 °C

Times: GC cycle time: 32 min, Vial equil time: 30 min

Vial: Fill pressure: 15 psi, Fill flow: 50 mL/min, Loop fill ramp rate: 20 psi/min, Loop final pressure: 10 psi, Vial Size: 20 mL, Shaking: 1

Carrier: GC controlled



High Performance Septa

Description	Agilent Certified Part No.	Unit	Compatible With
18 mm steel screw cap with High Performance Septa	5190-3986	100/pk	5188-2753, 5188-6537-5188-5392, 5188-6538
20 mm steel crimp cap with High Performance Septa	5190-3987	100/pk	5182-0837, 5183-4474, 5067-0226, 5190-2239, 5182-0838, 5183-4475, 5067-0227, 5190-2238

20 mm Headspace Crimp Caps and Septa

Cap Color	Septa Type	Specifications	100/pk	10,000/pk
Silver aluminum	PTFE/silicone septa	-60 °C to 180 °C	5183-4477	5190-2257
Silver aluminum with safety feature	PTFE/silicone septa	-60 °C to 180 °C	5183-4478	
Silver aluminum	Molded PTFE/butyl septa	-40 °C to 125 °C	5183-4479	5190-2258



Aluminum crimp caps, 5183-4477

Headspace Vial Convenience Kits

Septa Type	Vial Type	Cap Color	Specifications	Unit	Part No.
Molded PTFE/black butyl septa	Flat bottom	Silver aluminum with safety feature	< 125 °C	100/pk	5182-0839
PTFE/silicone septa	Flat bottom	Silver aluminum with safety feature	< 180 °C	100/pk	5182-0840



Headspace vial convenience kit

www.agilent.com/chem/CertifiedVials



Crimping and Decapping Tools

Electronic Crimpers and Decappers

Designed to replace awkward and bulky manual crimping pliers, the Agilent electronic handheld crimpers give tight, reproducible seals every time. Adjustable, slim steel jaws fit around closely spaced vials, enabling you to crimp vials directly in crowded autosampler trays. Using the same handheld design as the crimpers, Agilent's electronic decappers remove caps instantly and are designed for laboratories that recycle or reuse vials.



11 mm electronic crimper, 5190-3188



20 mm electronic crimper, 5190-3189



11 mm electronic decapper, 5190-3190



20 mm electronic decapper, 5190-3191

- More vials crimped per battery charge – new lithium ion battery lasts three times longer
- Increased crimping speed – new model is 50% more powerful. (6.4 volt battery)
- Less hand strain – lighter weight means less effort
- Improved power signal – clearly shows when battery needs recharging
- Easily used in right or left hand – display on top for easier viewing
- More efficient charging – no overheating during recharging
- Extended productivity – significantly longer motor life

Electronic Crimpers and Decappers

Description	Part No.
11 mm electronic crimper with lithium battery	5190-3188
20 mm electronic crimper with lithium battery	5190-3189
11 mm electronic decapper with lithium battery	5190-3190
20 mm electronic decapper with lithium battery	5190-3191
Replacement lithium battery for crimper and decapper	5190-3192

Manual Crimpers and Decappers

Agilent's new ergonomic manual crimpers and decappers remove the pain and discomfort of wrist strain with a lightweight, tailored design. Weighing 25-30% less than predecessors and eliminating sore, pinched hands, the new design dramatically improves your experience. Extensively tested with Agilent vials for optimal fit, and color-coded for ease-of-use, this tool is a necessity for every lab. The new crimpers are built for lasting performance: the 11 mm crimper will cap at least 100,000 caps and the 20 mm at least 60,000 before wear starts to impact performance.

- Comfortable, lightweight, ergonomically-designed handles fit smoothly in the hand and eliminate pinching
- Top-mounted adjustment knob shows directionality for tightening/loosening
- Adjustment knob doubles as an indicator that the crimp (or decap) is complete
- Crimpers are color-coded with blue knobs and labels, decappers with orange
- Narrow jaws provide better vertical clearance over vials
- Bottom handle motion allows for better control and enhanced stability of crimping jaw
- Sturdy construction of rugged, fiber-reinforced resin with steel reinforcement in the handles

Manual Crimpers and Decappers

Description	Part No.
Ergonomic manual crimper for 11 mm caps	5040-4667
Ergonomic manual decapper for 11 mm caps	5040-4668
Ergonomic manual crimper for 20 mm caps	5040-4669
Ergonomic manual decapper for 20 mm caps	5040-4671



Ergonomic manual crimper, 5040-4667

www.agilent.com/chem/CertifiedVials

Agilent CrossLab GC supplies – more Agilent quality solutions for your non-Agilent GCs

Agilent CrossLab is a growing portfolio of GC supplies manufactured to perform seamlessly with the non-Agilent GCs in your lab. Backed by 40 years of expertise and innovation, Agilent CrossLab supplies deliver the same commitment to quality inherent in all Agilent products. Backed by our 90-day guarantee, the portfolio includes:

- Autosampler syringes
- Autosampler vials, caps, and septa
- Inlet liners and liner O-rings
- Column nuts and ferrules
- And more

Learn more at www.agilent.com/chem/CrossLab



Improve analysis accuracy and safeguard GC columns and instruments with Agilent Gas Clean Filters

The Agilent Gas Clean filter system delivers clean gases, reduces the risks of column damage and sensitivity loss, and reduces gas consumption. A full range of filters is available, each with fast-stabilizing absorbent packed in a transparent, virtually unbreakable housing. In addition, Gas Clean's unique connection design prevents air from entering the system and shortens downtime by keeping your instrument under pressure during filter changes.

Find the Gas Clean Filters to meet your needs
at www.agilent.com/chem/Gas Clean



Examples of the Gas Clean filter range, showing the 4-position connecting unit for ease of operation

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