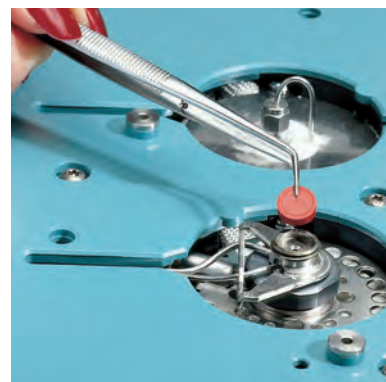


Inlet Septa

Septa are available for a variety of different applications and have different upper temperature limits. Lower temperature septa are usually softer, seal better, and can withstand more punctures (injections) than their high-temperature counterparts. If septa are used above their recommended temperatures, they can leak or decompose, causing sample loss, lower column flow, decreased column life, and ghosting. To minimize problems:

- Use within the recommended temperature range
- Change regularly
- Install the retainer nut "finger tight"
- Use septum purge when available
- Use autoinjectors
- Use sharp syringe needles



Premium Non-Stick Septa

Agilent premium non-stick inlet septa are designed and manufactured to provide a reliable non-contaminating seal. Our tri-fold blister pack ensures that each septum remains clean and ready to use.

- Proprietary plasma treatment prevents sticking and unnecessary inlet cleaning
- Innovative blister packaging keeps each septum clean and ready for use
- Center point guides the needle for easy penetration, less coring and longer life
- Precision molding assures accurate fit in the inlet
- Each batch is tested for bleed on Agilent 7890 GC-FID
- Premium formulations selected for sealing and chromatographic cleanliness
- No need to bake septa before using



Inlet Septa

Summary of Premium Inlet Septum Characteristics

Septum Type	Bleed	Lifetime	Temperature Limits
Non-Stick BTO (Bleed and Temperature Optimized)	✓✓✓	✓	to 400 °C injection port temp
Non-Stick Advanced Green	✓✓	✓✓	to 350 °C
Non-Stick Long-Life	✓	✓✓✓	to 350 °C

✓✓✓ = best ✓✓ = very good ✓ = good

TIPS & TOOLS

Need inlet septa for your non-Agilent instruments? Check the Agilent CrossLab septa starting on page 199.





Inlet Septa

Non-Stick Bleed and Temperature Optimized (BTO) Septa

- Extended temperature range, lowest bleed
- Maximum injection port temperature 400 °C
- Plasma treatment eliminates sticking in the injection port
- Pre-conditioned; ready to use
- Blister packaging for cleanliness and convenience
- Ideal for use with low-bleed, "Mass Spec" capillary columns

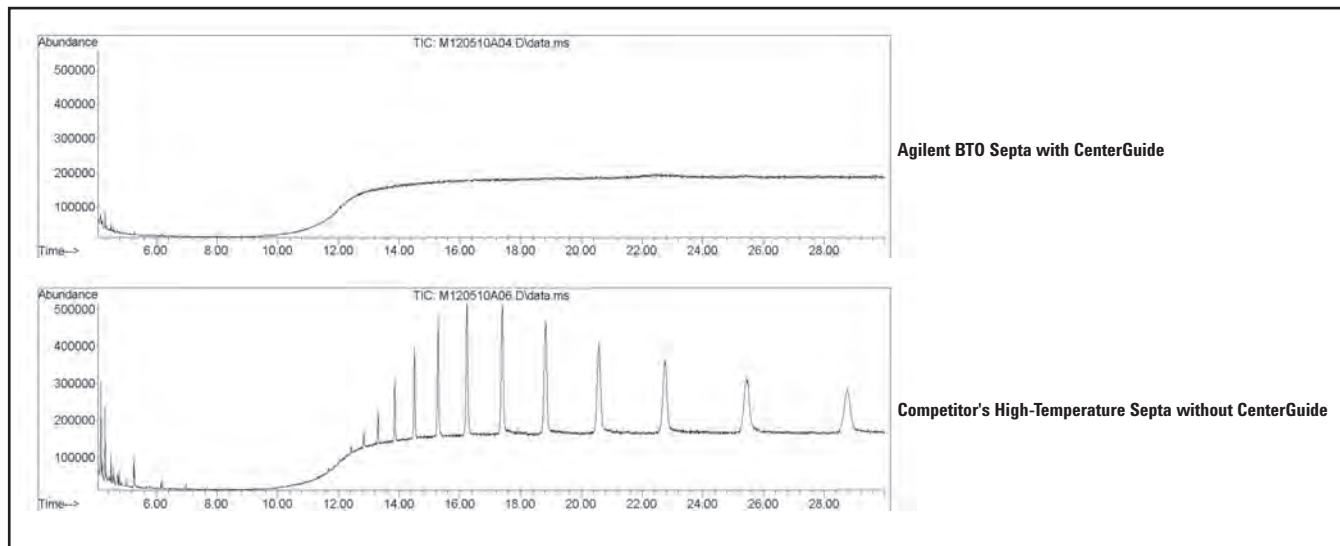


BTO septa, 5183-4757

Non-Stick Bleed and Temperature Optimized (BTO) Septa

Description	Unit	Part No.
Non-stick bleed and temperature optimized (BTO) septa, 11 mm	50/pk	5183-4757
Non-stick bleed and temperature optimized (BTO) septa, 11 mm	100/pk	5183-4757-100
Non-stick bleed and temperature optimized (BTO) septa, 11 mm	400/pk	5190-3157
5 mm septa through-hole for on-column, in glass jar	50/pk	5183-4758

Comparison of septum purity: TIC profile of isooctane extractions



Non-Stick Advanced Green Septa

- True long-life, high temperature green septa
- More injections per septum
- Plasma treatment eliminates sticking in the injection port
- Maximum injection port temperature 350 °C
- High-performance alternative to competitors' "green" septa
- Blister packaging for cleanliness and convenience

Non-Stick Advanced Green Septa

Description	Unit	Part No.
11 mm septa	50/pk	5183-4759
11 mm septa	100/pk	5183-4759-100
11 mm septa	400/pk	5190-3158
5 mm septa through-hole for on-column, in glass jar	50/pk	5183-4760



Advanced green septa, 5183-4759

Non-Stick Long-Life Septa

- The preferred septa for autosamplers
- Pre-pierced for extended life and reduced coring
- Ideal for overnight runs
- Up to 400 injections per septum
- Plasma treatment eliminates sticking
- Maximum injection port temperature 350 °C
- Soft, 45 durometer, easy on autosampler needles
- Blister packaging for cleanliness and convenience

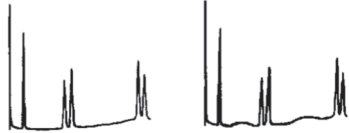

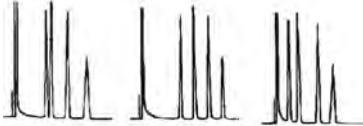
Non-Stick Long-Life Septa

Description	Unit	Part No.
Non-stick long-life septa, 11 mm	50/pk	5183-4761
Non-stick long-life septa, 11 mm	100/pk	5183-4761-100
5 mm septa through-hole for on-column, in glass jar	50/pk	5183-4762



Long-life septa, 5183-4761

Septa Troubleshooting

Symptom	Possible Causes	Remedy
<p>Extra Peaks/Humps</p> 	<p>Septum bleed</p>	<p>Turn off injector heater. If extra peaks disappear, use septum specified for higher temperature or analyze at lower inlet temperature.</p>
<p>Baseline Change After Large Peak</p> 	<p>Large leak at septum during injection and for a short time thereafter (common with large diameter needles)</p>	<p>Replace septum and use smaller diameter needles.</p>
<p>Retention Times Prolonged</p> 	<p>Carrier gas leaks at septum or column connection</p>	<p>Check for leaks. Replace septum or tighten connections if necessary.</p>



General Purpose Septa

Agilent's general purpose septa are made from an enhanced injection-molded silicone rubber. The septa material, gray in color, is specified to withstand over 200 automatic injections at an injection port temperature of 350 °C.

General Purpose Septa

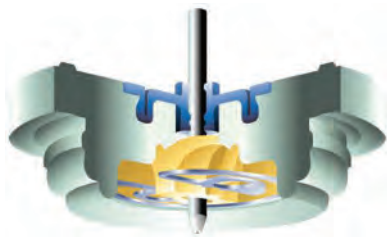
Description	Unit	Part No.
11 mm septa	50/pk	5080-8896-50
11 mm septa	100/pk	5080-8894-100
9.5 mm (3/8 in) septa*	50/pk	5080-8728-50
9.5 mm (3/8 in) septa*	100/pk	5080-8728-100
5 mm through-hole septa for on-column inlets, automatic or manual injections**	25/pk	5181-1260
5 mm septa for high column backpressure, on-column inlets**	25/pk	5181-1261

*For 5700 series and 5830/40 GCs

**5 mm septa are packaged in glass jars



General purpose gray septa



Merlin Microseal

- Low bleed, longer life alternative to standard septa for split/splitless injection and SPME
- Requires 23-gauge syringe needle
- Has a lifetime of more than 2000 injections, depending on samples and operating conditions
- Greatly reduced instrument downtime for septa changes and injection port liner changes due to septa particulates
- Two distinct sealing mechanisms: double O-ring type seal around the syringe needle and spring assisted duckbill to seal the injection port
- Temperature range 50-400 °C

Merlin Microseal

Description	Part No.
Merlin Microseal SPME replacement seal, 23-gauge, 1/pk	392609902
General Purpose Merlin Microseal (3-100 psi)	
Merlin Microseal starter kit, general purpose Includes Microseal septum and nut	5182-3442
Merlin Microseal general purpose replacement septum 3-100 psi	5182-3444
Merlin Microseal high pressure nut	5182-3445
High sample volume septum kit Contains general purpose Merlin Microseal, six 23-gauge syringes, 500 vials and caps	5181-8839
Low Pressure Merlin Microseal (1-45 psi)	
Merlin Microseal kit, low pressure Includes nut and septum	5181-8816
Merlin Microseal kit, low pressure Includes nut and 2 septa	5181-8833
Merlin Microseal low pressure replacement septum	5181-8815
Microseal PTFE nut liners, 2/pk	5182-0853

(Continued)

Merlin Microseal

Description	Part No.
For Bruker/Varian GCs*	
Merlin Microseal SPME kit, 1079 23-gauge, 1/pk	392609901
Merlin Microseal adapter kit for 1177 inlets Contains adapter, nut and general purpose Merlin Microseal septum	392609903
Syringes for Merlin Microseal	
Autosampler syringe, Gold Standard, 5 µL, 23-gauge	9301-0892
Autosampler syringe, Gold Standard plunger, 10 µL, 23-gauge	9301-0713
Autosampler syringe, Blue Line, 5 µL, 23-gauge	G4513-80213
Autosampler syringe, Blue Line, 10 µL, 23-gauge	G4513-80209

*Varian GC systems are now Bruker products

TIPS & TOOLS

Agilent Blue Line autosampler syringes are specifically designed to support the higher productivity features of the 7693A ALS, while increasing plunger life and reducing costly downtime. Learn more at www.agilent.com/chem/BlueLineSyringes

