








Deactivated Glass Liners for Packed Column Injection Ports

We can prepare liners to your specifications. Just call our Ordering and Customer Service Departments for a quote. These deactivated glass liners prevent reaction between active sample components and the injection port's metal surfaces.






INSTRUMENT MANUFACTURER & MODEL	LINER DESCRIPTION	MFR. PART NO.	QTY.	CAT. NO.	PRICE
AGILENT/HP 5700, 5830/40A, 5880A, 5890A					
	Glass liner	5080-8732	5	20508	
91.5mm x 3mm OD	1.8mm ID		25	20511	
PERKIN-ELMER 3920					
	Glass liner (small bore)	0009-1614	1	26301	
143mm x 4.6mm OD	1.5mm ID				
PERKIN-ELMER 8000, SIGMA 2000/2100, SIGMA 1B-4B & 300 MANUFACTURED 1978 OR LATER					
	Glass liner	0330-2221	1	26300-U	
101mm x 4.6mm OD	2.75mm ID		5	26409	
PERKIN-ELMER AUTO SYSTEM, MODEL 9000					
Unpacked	Packed column	N610-1048	1	2631601	
	3mm ID		5	2631605	
112mm x 6mm OD			25	2631625	
Packed (deactivated glass wool)	For dirty samples		5	2631705	
	3mm ID		25	2631725	
112mm x 6mm OD					
VARIAN UNIVERSAL FLASH INJECTORS 1060-60, 3300, 3400, 3500-3600, OLDER 3700/VISTA					
	Glass injector insert	37-000813-00	1	26369	
72mm x 6.3mm OD	(wool packed)		5	26426	
			25	26481	
VARIAN MODULINE AND OTHER OLDER MODELS					
	Glass insert	6-000107-01	10	26370-U	
5 1/2"/14cm x 1/8" OD	1.8mm ID				

Deactivated Glass Liners for Capillary Injection Ports

A regular schedule of inlet liner replacement will help prevent adsorption problems that can otherwise drastically affect analysis. We also can prepare replacement liners for other instruments or unique liners from your own design. Just call for a quote.

Our liners feature:

- High temperature silanization, to ensure inertness
- Consistent dimensions, tolerances and quality
- In-house manufacturing that meets or exceeds instrument manufacturer's specifications
















INSTRUMENT MANUFACTURER & MODEL	APPLICATION	MFR. PARTNO.	QTY.	CAT. NO.	PRICE
ATAS OPTIC 2 HIGH VOLUME INJECTOR					
Unpacked with single frit			1	2632601	
			5	2632605	
80mm x 5mm OD x 3mm ID			25	2632625	
CARLO ERBA/FISONS MODEL 6000 SERIES					
HS glass (2mm ID)	Trace analytes	45300300	1	2632001	
			5	2632005	
79.5mm x 5.5mm OD			25	2632025	
HS glass (4mm ID)	Trace analytes	45300400	5	2632105	
			25	2632125	
79.5mm x 5.5mm OD					
Splitless	4mm ID (with slot)	High & low MW analytes	1	2632301	
			5	2632305	
99mm x 5.5mm OD					
1.8mm ID (with slot)	Trace analytes	45320020	1	2632401	
			5	2632405	
99mm x 5.5mm OD					

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Gas Chromatography

## GC Accessories
















### Inlet Liners

	INSTRUMENT MANUFACTURER & MODEL	APPLICATION	MFR. PARTNO.	QTY.	CAT. NO.	PRICE
AGILENT/HP MODELS 4890, 5880, 5890, 6890						
Split	Cup (unpacked)	High & low MW analytes	18740-80190	5	2051005	
	25			2051025		
	78.5mm x 6.3mm OD					
	Cup (wool packed)	Dirty samples	18740-80190 <sup>1</sup>	1	2048201	
	5			2048205		
	25			2048225		
	78.5mm x 6.3mm OD					
	Cup (packed w/ 10% OV-1 on Chromosorb-W HP)	Dirty samples Traps non-volatiles Reduces discrimination	18740-60840	1	2055101	
	5			2055105		
	25			2055125		
78.5mm x 6.3mm OD						
Split/splitless (4mm ID, wool packed)	General For 7673 autosampler	19251-60540	1	2048601		
5			2048605			
25			2048625			
78.5mm x 6.3mm OD						
Splitless	2mm ID	Trace analytes Samples <2µL	18740-80220 <sup>2</sup>	1	2051301	
	5			2051305		
	25			2051325		
	78.5mm x 6.5mm OD					
	Dual-tapered	Active analytes in trace quantities	5181-3315	1	2048501	
	5			2048505		
	25			2048525		
	78.5mm x 6.5mm OD					
	Tapered (unpacked)	Active analytes in trace quantities	5181-3316	1	2046601	
	5			2046605		
25	2046625					
78.5mm x 6.5mm OD						
Tapered (wool packed)	General For 7673 autosampler	5062-3587	1	2047801		
5			2047805			
25			2047825			
78.5mm x 6.5mm OD						
Direct	0.75mm ID	SPME <sup>3</sup> Small volume	no equivalent	1	2637501	
	5			2637505		
	25			2637525		
	78.5mm x 6.3mm OD					
	1.5mm ID	Headspace & purge/trap devices	18740-80200	1	2051701	
	5			2051705		
25	2051725					
78.5mm x 6.5mm OD						
FINNIGAN MODELS 9001, GCQ						
Split	Cup (unpacked)	High & low MW analytes	18740-80190	5	2051005	
	25			2051025		
	78.5mm x 6.3mm OD					
	Cup (wool packed)	Dirty samples	18740-80190 <sup>1</sup>	1	2048201	
	5			2048205		
	25			2048225		
	78.5mm x 6.3mm OD					
	Cup (packed w/ 10% OV-1 on Chromosorb-W HP)	Dirty samples Traps non-volatiles Reduces discrimination	18740-60840	1	2055101	
	5			2055105		
	25			2055125		
78.5mm x 6.3mm OD						
Split/splitless (4mm ID, wool packed)	General For 7673 autosampler	19251-60540	1	2048601		
5			2048605			
25			2048625			
78.5mm x 6.3mm OD						
Splitless	2mm ID	Trace analytes Samples <2µL	18740-80220 <sup>2</sup>	1	2051301	
	5			2051305		
	25			2051325		
78.5mm x 6.5mm OD						

<sup>1</sup> Supelco version has been modified to enhance performance.

<sup>2</sup> Instrument manufacturer's nondeactivated liner

<sup>3</sup> Solid Phase Microextraction

	INSTRUMENT MANUFACTURER & MODEL	APPLICATION	MFR. PARTNO.	QTY.	CAT. NO.	PRICE
<b>FINNIGAN MODELS 9001, GCQ (CONT'D)</b>						
Splitless	Dual-tapered 	Active analytes in trace quantities	5181-3315	1	2048501	
				5	2048505	
				25	2048525	
	78.5mm x 6.5mm OD Tapered (unpacked) 	Active analytes in trace quantities	5181-3316	1	2046601	
				5	2046605	
				25	2046625	
	78.5mm x 6.5mm OD Tapered (wool packed) 	General For 7673 autosampler	5062-3587	1	2047801	
	5			2047805		
	25			2047825		
Direct	0.75mm ID 	SPME <sup>3</sup> Small volume	no equivalent	1	2637501	
				5	2637505	
				25	2637525	
	78.5mm x 6.3mm OD 1.5mm ID 	Headspace & purge/trap devices	18740-80200	1	2051701	
	5			2051705		
	25			2051725		
	78.5mm x 6.5mm OD					
<b>PERKIN-ELMER MODELS 2000, 8000</b>						
Split	Wide bore, 4mm ID 	General purpose Dirty samples	0330-5181	1	2630301	
				5	2630305	
				25	2630325	
Splitless	100mm x 5mm OD narrow bore, 2mm ID 	Trace analytes	0330-5180	1	2630401	
				5	2630405	
				25	2630425	
	100mm x 5mm OD Glass (unpacked) 	For high linearity	N600-2017	1	2630601	
	25			2630625		
	88mm x 2mm					
<b>PERKIN-ELMER AUTO SYSTEM, MODEL 9000 SPLIT/SPLITLESS CAPILLARY INJECTOR</b>						
Split		General purpose	N610-1052 N612-1001 <sup>4</sup>	1	2630901	
				5	2630905	
				25	2630925	
Splitless	Packed (deactivated glass wool) 	General purpose Dirty samples		5	2631005	
				25	2631025	
SPME	92mm x 0.25" OD x 4mm ID 	Trace analytes	N612-1002 <sup>4</sup>	5	2631105	
				25	2631125	
	92mm x 0.25" OD x 2mm ID 			SPME		5
92mm x 0.25" OD x 0.75mm ID						
<b>PERKIN-ELMER PROGRAMMED SPLIT/SPLITLESS INJECTION (PSS)</b>						
Split			N612-1004 <sup>4</sup>	1	2631301	
				5	2631305	
				25	2631325	
Splitless	86mm x 4mm OD x 2mm ID 	Trace analytes	N612-1006 <sup>4</sup>	5	2631405	
On-Column	86mm x 4mm OD x 1mm ID 	Thermolabile Trace analytes	N610-1539	5	2631505	
	86mm x 4mm OD					

<sup>3</sup> Solid Phase Microextraction.  
<sup>4</sup> Instrument manufacturer's quartz liner.

G000425-435

















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### Inlet Liners

INSTRUMENT MANUFACTURER & MODEL		APPLICATION	MFR. PARTNO.	QTY.	CAT. NO.	PRICE
<b>SHIMADZU MODELS 9A/AM/15A/16 WITH SPL-G9/15 INJECTORS</b>						
Split	 127mm x 5mm OD	High & low MW analytes	221-25822-01	1	2633001	
				5	2633005	
				25	2633025	
Splitless	 127mm x 5mm OD	Trace analytes	221-25440-03	1	2633101	
				5	2633105	
				25	2632901	
Splitless/SPME	 127mm x 0.75mm ID x 5mm OD	SPME		1	2632901	
				5	2632905	
				25	2632925	
<b>SHIMADZU MODELS 14/15A/16 WITH SPL-14 INJECTORS</b>						
Split	 99mm x 5mm OD	General purpose	221-32544-01	1	2633301	
				5	2633305	
				25	2633325	
Splitless/SPME	 99mm x 5mm OD	Trace analytes	221-32544-00	1	2633401	
				5	2633405	
				25	2633425	
Splitless/SPME	 99mm x 5mm OD x 0.75mm ID	SPME		1	2633501	
				5	2633505	
				25	2633525	
<b>SHIMADZU MODEL 17A WITH SPL-17 INJECTORS</b>						
Split	 95mm x 5mm OD	General purpose	221-41444-00	1	2633601	
				5	2633605	
				25	2633625	
Split	 Packed (deactivated glass wool)	Dirty samples		5	2632705	
				25	2632725	
				25	2632725	
Splitless/SPME	 95mm x 5mm OD	Trace analytes	221-41544-00	5	2633705	
				25	2633725	
				25	2633725	
Splitless/SPME	 95mm x 5mm OD x 0.75mm ID	SPME		1	2633901	
				5	2633905	
				25	2633925	
Wide Bore	 Internal taper	Wide bore capillary columns	221-41599	1	2633801	
				5	2633805	
				25	2633825	
Wide Bore	 95mm x 5mm OD			1	2633801	
				5	2633805	
				25	2633825	
<b>VARIAN 1075/1077 INJECTORS</b>						
Split	 72mm x 6.3mm OD with frit	High & low MW analytes	16-000830-00 <sup>2</sup>	1	2636101	
				5	2636105	
				25	2636125	
Split	 72mm x 6.3mm OD Wool packed	Dirty samples	16-000830-01 <sup>2</sup> 01-900109-03	1	2050501	
				5	2050505	
				25	2050525	
Split	 72mm x 6.3mm OD Packed w/ 10% OV-101 on Chromosorb W HP 80/100	Complete vaporization Aids thermal transfer	03-949809-00 <sup>2</sup>	1	2055501	
				5	2055505	
				25	2055525	
Split	 72mm x 6.3mm OD			1	2636001	
				5	2636005	
				25	2636025	















<sup>2</sup> Instrument manufacturer's nondeactivated liner.

<sup>3</sup> Solid Phase Microextraction.

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	INSTRUMENT MANUFACTURER & MODEL	APPLICATION	MFR. PARTNO.	QTY.	CAT. NO.	PRICE	
<b>VARIAN 1075/1077 INJECTORS (CONT'D)</b>							
Split	with baffle 	Analytes with close boiling points	16-000829-00 <sup>2</sup> 01-900109-04	1	2050101		
				5	2050105		
	72mm x 6.3mm OD Cup (unpacked)			25	2050125		
Split		High & low MW analytes	01-900109-02	1	2049801		
				5	2049805		
	72mm x 6.3mm OD Straight			25	2049825		
Splitless/SPME		Trace analytes	03-949437-90 <sup>2</sup> 01-900109-05	1	2050201		
				5	2050205		
	74mm x 6.3mm OD 0.75mm ID			25	2050225		
Splitless/SPME		SPME Small volume	no equivalent	1	2635801		
				5	2635805		
	74mm x 6.35mm OD			25	2635825		
Direct	Fused silica 	High linearity (0.25/0.32mm ID columns)	03-908725-00	1	2636201		
				5	2636205		
	72mm x 6.3mm OD						
Universal Flash	Glass flash inserts (0.53mm ID columns) 		03-918339-00	1	2636801		
				5	2636805		
	73mm x 0.25" OD			25	2636825		
<b>VARIAN 1093-94 SPI INJECTOR</b>							
Direct/SPME	Glass insert (high performance) 	High linearity (0.25 & 0.32mm ID columns)	03-918332-01 <sup>2</sup> 01-900109-06 01-900066-18	1	2636301		
				5	2636305		
	54mm x 4.6mm OD Flash & on-column insert (0.53mm ID column)			25	2636325		
Direct/SPME		High linearity (0.53mm ID columns) SPME	03-918332-02 <sup>2</sup> 01-900109-07 01-900066-19	1	2636401		
				5	2636405		
	54mm x 4.6mm OD Glass insert (wool packed)			25	2636425		
Direct/SPME		Dirty samples	01-900109-08	5	2636505		
				25	2636525		
	54mm x 4.6mm OD						
<b>VARIAN 1078/1079 INJECTOR</b>							
Split	Frit 	Instantaneous sample vaporization	03-918464-01	1	2637201		
				5	2637205		
	54mm x 5mm OD x 3.4mm ID Unpacked			25	2637225		
				03-918464-00	1	2637101	
					5	2637105	
	54mm x 5mm OD x 3.4mm ID Packed				25	2637125	
Splitless/SPME		Minimizes dead volume	03-918466-00	1	2637301		
				5	2637305		
	54mm x 5mm OD x 3.4mm ID Unpacked			25	2637325		
				03-925330-00	1	2637401	
					5	2637405	
	54mm x 5mm OD x 2mm ID				25	2637425	
Splitless/SPME		SPME	03-925330-00	1	2637801		
				5	2637805		
	54mm x 5mm OD x 0.8mm ID						

<sup>2</sup> Instrument manufacturer's nondeactivated liner.

<sup>3</sup> Solid Phase Microextraction.

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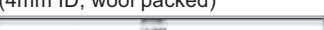




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## GC Accessories

### Inlet Liners

	INSTRUMENT MANUFACTURER & MODEL	APPLICATION	MFR. PARTNO.	QTY.	CAT. NO.	PRICE
<b>VARIAN 1078/1079 INJECTOR (CONT'D)</b>						
Splitless		Trace analytes	03-925331-00	1	2637601	
		Thermolabile and		5	2637605	
	54mm x 5mm OD x 0.5mm ID	polar compounds		25	2637625	
	Packed (deactivated glass wool)	Nonpolar compounds	03-925350-00	1	2637701	
Split/Splitless				5	2637705	
				25	2637725	
<b>VARIAN MODEL CP-1177 INJECTOR</b>						
Direct	Cup (unpacked)	High & low	18740-80190	5	2051005	
		MW analytes		25	2051025	
	78.5mm x 6.3mm OD					
	Cup (wool packed)	Dirty samples	18740-80190 <sup>1</sup>	1	2048201	
				5	2048205	
	78.5mm x 6.3mm OD			25	2048225	
	Cup (packed w/ 10% OV-1 on Chromosorb-W HP)	Dirty samples		1	2055101	
		Traps non-volatiles	18740-60840	5	2055105	
	78.5mm x 6.3mm OD	Reduces discrimination		25	2055125	
	Split/splitless (4mm ID, wool packed)	General				
Splitless		For 7673 autosampler		1	2048601	
	78.5mm x 6.3mm OD		19251-60540	5	2048605	
	2mm ID			25	2048625	
		Trace analytes	18740-80220 <sup>2</sup>	1	2051301	
	78.5mm x 6.5mm OD	Samples <2µL	5181-8818	5	2051305	
	Dual-tapered			25	2051325	
		Active analytes in trace quantities	5181-3315	1	2048501	
	78.5mm x 6.5mm OD			5	2048505	
	Tapered (unpacked)			25	2048525	
		Active analytes in trace quantities	5181-3316	1	2046601	
78.5mm x 6.5mm OD			5	2046605		
Tapered (wool packed)			25	2046625		
SPME		General	5062-3587	1	2047801	
	78.5mm x 6.5mm OD	For 7673 autosampler		5	2047805	
	0.75mm ID			25	2047825	
		SPME <sup>3</sup>	no	1	2637501	
	78.5mm x 6.3mm OD	Small volume	equivalent	5	2637505	
	1.5mm ID			25	2637525	
		Headspace & purge/trap devices	18740-80200	1	2051701	
	78.5mm x 6.5mm OD			5	2051705	
	54mm x 5mm OD x 2mm ID			25	2051725	

<sup>1</sup> Supelco version has been modified to enhance performance

<sup>2</sup> Instrument manufacturer's nondeactivated liner.

<sup>3</sup> Solid Phase Microextraction.

Ferrules/Metal Spacers for 5mm  
Shimadzu Inlet Liners and Columns

Replace Shimadzu part number 221-15563-91.

DESCRIPTION	CAT. NO.	PRICE
Ferrules for Shimadzu Liners (pk. of 4)	23311	

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## GC Accessories Injection Sleeves



A syringe with a 6"/15.24cm needle is required to deposit samples properly within the sleeve.

### Cool On-Column Injection Sleeve Kit

Minimize splitter discrimination - Splitter discrimination among sample components that have different boiling points causes inaccurate quantification among components. Using our 6.25"/16cm x 1/4" Cool On-Column Injection Sleeve (Cat. No. 20476) in conjunction with a 0.53mm ID SPB-1 Thin Film capillary column, we found splitter discrimination was negligible for paraffins up to C44.

The sleeve was designed for use with a 0.53mm ID fused silica column. Use the hardware supplied in the injection sleeve kit (Cat. No. 23630) to install the sleeve in a 1/4" packed column injection system (on-column injection only).

DESCRIPTION	CAT. NO.	PRICE
Cool On-Column Injection Sleeve Kit (Injection sleeve plus 1/4" connecting hardware)	23630	
Cool On-Column Injection Sleeve	20476	
Reducing Union	23633	
Male Nuts, 1/16" (pk. of 4)	23805	
Knurled Male Nuts, 1/16" (pk. of 2)	23812	
Hamilton 701N Syringe (10µL), 6"/15.24cm fixed needle	21574	



### Injection Tee Kit

Simultaneous analyses on two wide bore columns. This kit enables you to characterize samples on two wide bore columns of different polarity. The tee is deactivated and the inlet chamfered for use with automatic samplers. Use in 1/4" injection ports.

Kit includes deactivated glass tee, two 1/4" x 1/16" stainless steel reducing unions, ferrules for 0.53mm and 0.75mm ID columns, and instructions.

DESCRIPTION	CAT. NO.	PRICE
Injection Tee Kit #1 (6"/15cm tee)	23664	
Injection Tee Kit #2 (8"/20cm tee)	23665	
Tee, 6"/15cm	23666	
Tee, 8"/20cm	23667	
Reducing Union	23633	
Male Nuts, 1/16" (pk. of 4)	23805	
Knurled Male Nuts, 1/16" (pk. of 2)	23812	

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## GC Accessories

### Capillary GC

#### SGE ms-NoVent System

A new, time-saving accessory for GC/MS systems.

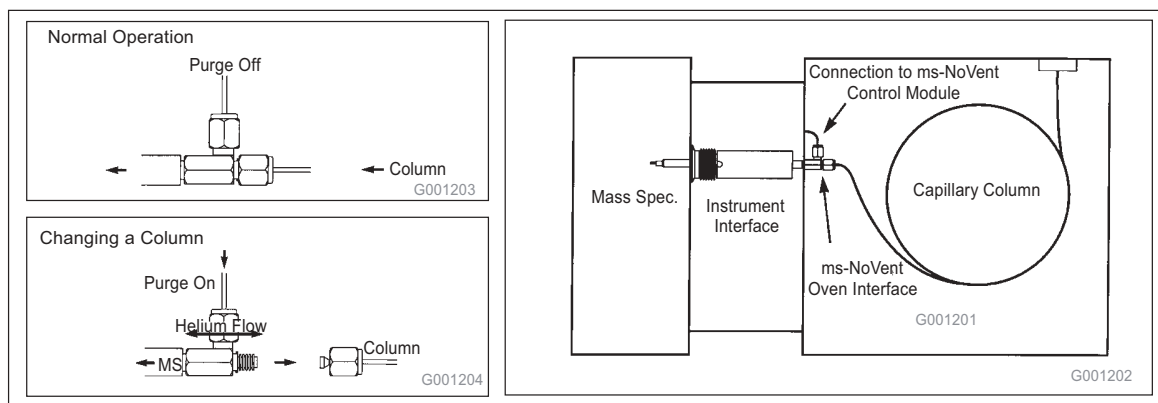
Typically, much GC/MS operating time is wasted when the capillary GC column must be disconnected at the detector end. Disconnecting a column means shutting down the ion source, cooling the mass spectrometer, and venting the MS to air. After the column is replaced or reconnected, the system must be evacuated and allowed to stabilize for hours before useful data can be obtained. The time involved can vary from 3-4 hours, at best, to several days, but these precautions are necessary to avoid damaging the ion source by exposure to oxygen or diffusion oil.

In contrast, the ms-NoVent\* system allows you to use the MS almost immediately after replacing a column, producing results in minutes, rather than after many hours. Installing a new column simply involves turning on a helium purge gas, then replacing the column. There is no time limit to how long the MS system can be left open. If you wish to condition the new column before connecting it to the MS, simply leave the helium purge on until the column has been conditioned, cool the system down, and connect the column.

The system consists of an external control module (80mm x 50mm x 150mm) and an interface that connects to the inlet in the mass spectrometer. A fused silica transfer line (restrictor), specific in length for each MS instrument, fits inside the interface. The restrictor line restricts the gas flow that can be pulled into the ion source, allowing a low pressure to be maintained in the MS. Control of the helium purge, on the MS side of the fused silica restrictor, ensures that there is flow in only one direction, preventing air from being drawn into the mass spectrometer. As a result, only pure helium can enter the MS while the system is open.

The ms-NoVent system can be installed in approximately 30 minutes. The system is compatible with Hewlett-Packard (5970, 5971/5972, 5973), Varian (Saturn), and Shimadzu (5000/5050) GC/MS instruments. Order the fused silica restrictor appropriate for your instrument.

Dramatically cuts MS down-time



DESCRIPTION	CAT. NO.	PRICE
ms-NoVent System	26191-U	
<b>RESTRICTORS FOR MS-NOVENT SYSTEM</b>		
Restrictor for HP5970	26192-U	
Restrictor for HP 5971/5972	26193-U	
Restrictor for HP 5973	26194-U	
Restrictor for Varian Saturn	26195-U	
Restrictor for Shimadzu 5000/5050	26196-U	

<sup>1</sup> Restrictor not included with ms-NoVent system. Order separately according to the model of your GC/MS system.

\* Patent pending.

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