

## Other Deactivations

### Intermediate Polarity (IP) Deactivation

- Phenylmethyl-deactivated surface for better recovery of polar and nonpolar compounds.
- Compatible with most common solvents.
- Our standard deactivation—every clear Restek® liner is IP deactivated unless otherwise requested.

### Siltek®-Deactivation\*

For Siltek®-deactivated inlet liners, add the corresponding suffix number to the liner catalog number. (Cannot be used with Sky® liners.)

| qty.   | Siltek Liner | Siltek Liner w/Wool | Siltek Liner w/CarboFrit |
|--------|--------------|---------------------|--------------------------|
| 5-pk.  | -214.5       | -213.5              | -216.5                   |
| 25-pk. | -214.25      | -213.25             | -216.25                  |

\*There is an additional cost for these deactivations. Contact your Restek representative for pricing.

### Base-Deactivation\*

For base-deactivated inlet liners, add the corresponding suffix number to the liner catalog number. (Cannot be used with Sky® liners.)

| qty.   | Base-Deactivated Liner | Base-Deactivated Liner w/ Base-Deactivated Wool | Base-Deactivated Liner w/CarboFrit |
|--------|------------------------|---|------------------------------------|
| 5-pk.  | -210.5                 | -211.5  | -229.5                             |
| 25-pk. | -210.25                | -211.25   | -229.25                            |

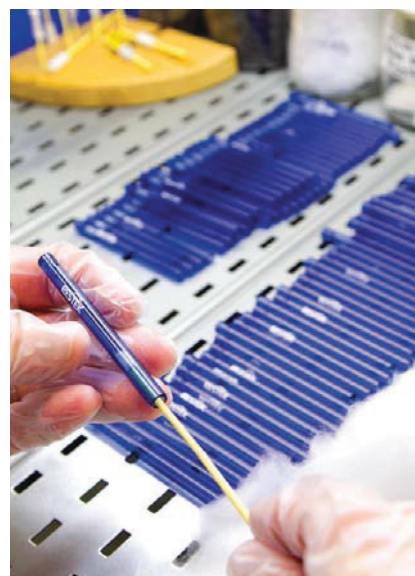
\*There is an additional cost for these deactivations. Contact your Restek representative for pricing.

## Don't Forget Routine Maintenance

Inlet liners are the key to good injection port maintenance; changing them regularly helps prevent the following problems:

- Sample degradation resulting in poor response.
- Sample adsorption resulting in poor peak shape (tailing).
- Sample discrimination.
- Irreproducibility.
- Extraneous peaks from contamination or cored septum particles.

Finally, be sure to condition your liners at 20 °C higher than the operating inlet temperature for a minimum of 10 minutes to prepare them for use. By following these basic tips, you can avoid inlet problems and improve chromatographic performance.



Sky® inlet liners feature Restek's premier deactivation.

**Sky**  
Inlet Liners



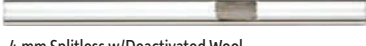
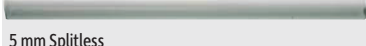

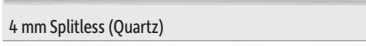

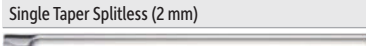
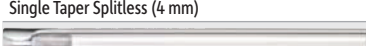
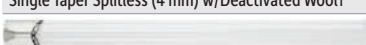



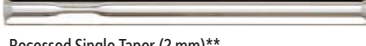
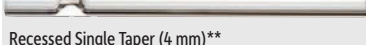
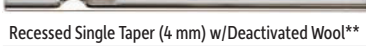
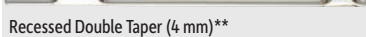
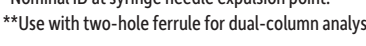


## Looking for the Best Solution?

Sky® inlet liners, featuring a state-of-the-art deactivation, give you the inertness you need for accurate, reproducible trace-level results.

See pages 193–202 for details.

Liners for Agilent GCs



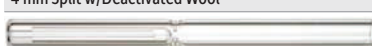




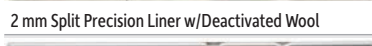
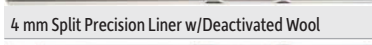



| Splitless Liners for Agilent GCs   | Benefits/Uses  | ID*<br>OD x Length         | Similar to<br>Agilent Part #                                 | ea.<br>cat.# | 5-pk.<br>cat.# | 25-pk.<br>cat.# |
|--|--|----------------------------|--|--------------|----------------|-----------------|
| <br>2 mm Splitless                                      | trace samples <2 µL                                    | 2.0 mm<br>6.5 mm x 78.5 mm | 5181-8818 (ea.)<br>5183-4703 (5-pk.)<br>5183-4704 (25-pk.)   | 20712        | 20713          | 20714           |
| <br>4 mm Splitless                                      | trace samples >2 µL                                    | 4.0 mm<br>6.5 mm x 78.5 mm | 210-3003 (ea.)<br>210-3003-5 (5-pk.)                         | 20772        | 20773          | 20774           |
| <br>4 mm Splitless w/Deactivated Wool                   | trace samples >2 µL                                    | 4.0 mm<br>6.5 mm x 78.5 mm | 19251-60540 (ea.)<br>5183-4691 (5-pk.)<br>5183-4692 (25-pk.) | 22400        | 22401          | 22402           |
| <br>5 mm Splitless                                      | accommodates more polar solvents and lower MW solvents | 5.0 mm<br>6.5 mm x 78.5 mm |  | 22975        | 22976          |                 |
| <br>2 mm Splitless (Quartz)                             | trace samples <2 µL                                    | 2.0 mm<br>6.5 mm x 78.5 mm | 18740-80220 (ea.)<br>5183-4707 (5-pk.)                       | 20914        | 20915          |                 |
| <br>4 mm Splitless (Quartz)                             | trace samples >2 µL                                    | 4.0 mm<br>6.5 mm x 78.5 mm |  | 20912        | 20913          |                 |
| <br>4 mm Splitless w/Deactivated Wool (Quartz)          | trace samples >2 µL                                    | 4.0 mm<br>6.5 mm x 78.5 mm |  | 22403        | 22404          |                 |
| <br>Single Taper Splitless (2 mm)                       | trace samples <2 µL                                    | 2.0 mm<br>6.5 mm x 78.5 mm |  | 20795        | 20796          | 20797           |
| <br>Single Taper Splitless (4 mm)                      | trace samples >2 µL                                    | 4.0 mm<br>6.5 mm x 78.5 mm | 5181-3316 (ea.)<br>5183-4695 (5-pk.)<br>5183-4696 (25-pk.)   | 20798        | 20799          | 20800           |
| <br>Single Taper Splitless (4 mm) w/Deactivated Wool  | trace samples >2 µL                                    | 4.0 mm<br>6.5 mm x 78.5 mm | 5062-3587 (ea.)<br>5183-4693 (5-pk.)<br>5183-4694 (25-pk.)   | 22405        | 22406          | 22407           |
| <br>Single Taper Splitless (5 mm)                     | accommodates more polar solvents and lower MW solvents | 5.0 mm<br>6.5 mm x 78.5 mm |  | 22973        | 22974          |                 |
| <br>Double Taper Splitless (4 mm)                     | trace, active samples >2 µL                            | 4.0 mm<br>6.5 mm x 78.5 mm | 5181-3315 (ea.)<br>5183-4705 (5-pk.)<br>5183-4706 (25-pk.)   | 20784        | 20785          | 20786           |
| <br>Cyclo Double Taper (2 mm)                         | trace, active, dirty samples <2 µL                     | 2.0 mm<br>6.5 mm x 78.5 mm |  | 20907        | 20908          |                 |
| <br>Cyclo Double Taper (4 mm)                         | trace, active, dirty samples >2 µL                     | 4.0 mm<br>6.5 mm x 78.5 mm |  | 20895        | 20896          | 20997           |
| <br>Recessed Single Taper (2 mm)**                    | base easily packs with wool for dirty samples <2 µL    | 2.0 mm<br>6.5 mm x 78.5 mm |  | 20980        | 20981          | 20982           |
| <br>Recessed Single Taper (4 mm)**                    | base easily packs with wool for dirty samples >2 µL    | 4.0 mm<br>6.5 mm x 78.5 mm |  | 20983        | 20984          | 20985           |
| <br>Recessed Single Taper (4 mm) w/Deactivated Wool** | base easily packs with wool for dirty samples >2 µL    | 4.0 mm<br>6.5 mm x 78.5 mm |  | 22408        | 22409          | 22410           |
| <br>Recessed Double Taper (4 mm)**                    | trace, active samples >2 µL                            | 4.0 mm<br>6.5 mm x 78.5 mm |  | 20986        | 20987          |                 |

\*Nominal ID at syringe needle expulsion point.

\*\*Use with two-hole ferrule for dual-column analysis.

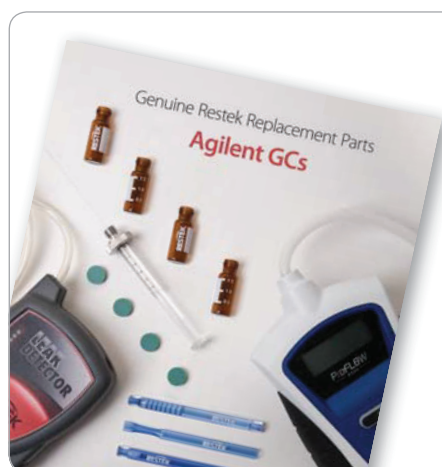
COLUMN INSTALLS THIS END

Liners for Agilent GCs, *cont.*

| Split Liners for Agilent GCs   | Benefits/Uses   | ID*<br>OD x Length           | Similar to<br>Agilent Part#  | ea.<br>cat.# | 5-pk.<br>cat.# | 25-pk.<br>cat.# |
|--|---|------------------------------|--|--------------|----------------|-----------------|
|  1 mm Split**   | for purge & trap inlet splitting or sample <1 µL        | 1.0 mm<br>6.3 mm x 78.5 mm   | 18740-80200 (ea.)<br>5183-4709 (5-pk.)   | 20972        | 20973          |                 |
|  4 mm Split w/Deactivated Wool                          | universal, use with Agilent 7673 autosampler            | 4.0 mm<br>6.3 mm x 78.5 mm   | 19251-60540 (ea.)<br>5183-4691 (5-pk.)<br>5183-4692 (25-pk.)                     | 20781        | 20782          | 20783           |
|  Laminar Cup Splitter                                   | high MW compounds                                       | 4.0 mm<br>6.3 mm x 78.5 mm   |  | 20801        | 20802          |                 |
|  mini-Lam Split   | high MW compounds                                       | 4.0 mm<br>6.3 mm x 78.5 mm   |  | 20990        | 20991          |                 |
|  Cup Splitter   | high & low MW compounds                                 | 4.0 mm<br>6.3 mm x 78.5 mm   | 18740-80190 (ea.)<br>5183-4699 (5-pk.)   | 20709        | 20710          |                 |
|  Cyclo  | dirty samples, many injections before cleaning required | 4.0 mm<br>6.3 mm x 78.5 mm   |  | 20706        | 20707          | 20708           |
|  2 mm Split Precision Liner w/Deactivated Wool          | dirty samples, trace samples                            | 2.0 mm<br>6.3 mm x 78.5 mm   |  | 20823        | 20824          |                 |
|  4 mm Split Precision Liner w/Deactivated Wool          | dirty samples, trace samples                            | 4.0 mm<br>6.3 mm x 78.5 mm   | 210-4004-5 (5-pk.)   | 21022        | 21023          | 20979           |
|  4 mm Single Taper Precision Liner w/Deactivated Wool   | dirty samples, trace samples                            | 4.0 mm<br>6.3 mm x 78.5 mm   | 210-4022-5, 5183-4712 (5-pk.)  | 22983        | 22984          | 22985           |
| <b>Split/Splitless Liners for Agilent GCs</b>  |   |                              |  |              |                |                 |
|  Low Pressure Drop Precision Liner w/Deactivated Wool | universal   | 4.0 mm<br>6.3 mm x 78.5 mm   |  | 21032        | 21033          |                 |
|  Low Pressure Drop Liner w/Deactivated Wool           | universal   | 4.0 mm<br>6.3 mm x 78.5 mm   | 5183-4647, 5183-4711 (ea.)<br>5183-4701, 5183-4712 (5-pk.)<br>5183-4713 (25-pk.) | 20994        | 20995          | 20996           |
| <b>SPME Liners for Agilent GCs</b>   |   |                              |  |              |                |                 |
|  SPME Liner   | ideal for low-volume SPME applications                  | 0.75 mm<br>6.35 mm x 78.5 mm |  |              | 21110          | 21111           |

COLUMN INSTALLS THIS END

\*Nominal ID at syringe needle expulsion point.  
\*\*Use this liner for increased sensitivity.



## Genuine Restek Replacement Parts for Agilent GCs

Download *Genuine Restek Replacement Parts Catalog for Agilent GCs* today!

[www.restek.com/GRRP](http://www.restek.com/GRRP)

Liners for Agilent GCs, cont.

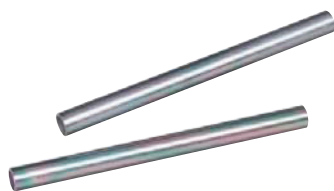
| DI Liners for Agilent GCs**<br>(For 0.25/0.32/0.53mm ID Columns) |   | Benefits/Uses  | ID*<br>OD x Length         | Similar to<br>Agilent Part # | ea.<br>cat.# | 5-pk.<br>cat.# | 25-pk.<br>cat.# |
|--|---|--|----------------------------|------------------------------|--------------|----------------|-----------------|
| COLUMN INSTALLS THIS END   |   | trace, active samples, high recovery & linearity                 | 4.0 mm<br>6.3 mm x 78.5 mm |                              | 21054        | 21055          | 20998           |
|  | Drilled Uniliner (hole near top)                                |  |                            |                              |              |                |                 |
|  |   | trace, active samples, high recovery & linearity                 | 4.0 mm<br>6.3 mm x 78.5 mm | G1544-80730                  | 20756        | 20771          |                 |
|  | Drilled Uniliner (hole near bottom)                             |  |                            |                              |              |                |                 |
|  |   | trace, active samples, high recovery & linearity                 | 4.0 mm<br>6.3 mm x 78.5 mm |                              | 20508        | 20509          |                 |
|  | Double Taper Drilled Uniliner (hole near top)                   |  |                            |                              |              |                |                 |
|  |   | trace, active samples, high recovery & linearity                 | 4.0 mm<br>6.3 mm x 78.5 mm | G1544-80700                  | 20954        | 20989          |                 |
|  | Double Taper Drilled Uniliner (hole near bottom)                |  |                            |                              |              |                |                 |
|  |   | trace, dirty, high MW, active samples, high recovery & linearity | 4.0 mm<br>6.3 mm x 78.5 mm |                              | 22979        | 22980          |                 |
|  | Drilled Cyclo-Uniliner (hole near top)                          |  |                            |                              |              |                |                 |
|  | trace, active samples, samples <1 µL                            | 1.0 mm<br>6.3 mm x 78.5 mm                                       |                            | 21052                        | 21053        |                |                 |
| 1 mm Uniliner  |   |  |                            |                              |              |                |                 |
|  | trace, active samples, high recovery & linearity                | 4.0 mm<br>6.3 mm x 78.5 mm                                       |                            | 22268                        | 22269        |                |                 |
| Uniliner   |   |  |                            |                              |              |                |                 |
|  | trace, dirty, high MW active samples, high recovery & linearity | 4.0 mm<br>6.3 mm x 78.5 mm                                       |                            | 22270                        | 22271        |                |                 |
| Cyclo-Uniliner   |   |  |                            |                              |              |                |                 |
|  | trace, dirty, active samples, high recovery & linearity         | 4.0 mm<br>6.3 mm x 78.5 mm                                       |                            | 22272                        | 22273        |                |                 |
| Open-top Uniliner w/Deactivated Wool                             |   |  |                            |                              |              |                |                 |

| CIS4 and PTV<br>Liners for Agilent GCs |                         | Benefits/Uses                       | ID*<br>OD x Length       | Similar to<br>Agilent Part# | 10-pk.<br>cat.# |
|--|-------------------------|-------------------------------------|--------------------------|-----------------------------|-----------------|
| COLUMN INSTALLS THIS END               |                         | general use                         | 2.0 mm<br>3.0 mm x 71 mm | 5183-2036                   | 21157           |
|  | Straight Glass          |                                     |                          |                             |                 |
|  |                         | active compounds, drugs, pesticides | 1.5 mm<br>3.0 mm x 71 mm | 5183-2037                   | 21704           |
| Baffled Glass                          |                         |                                     |                          |                             |                 |
|  | large volume injections | 2.0 mm<br>3.0 mm x 71 mm            | 5183-2038                | 21156                       |                 |
| Glass w/Deactivated Wool               |                         |                                     |                          |                             |                 |

\*Nominal ID at syringe needle expulsion point.

\*\*Hole in Drilled Uniliner liner makes direct injection possible with EPC-equipped Agilent 6890 & 7890 GCs!



**Siltek® Metal Inlet Liners** for Agilent GCs  
Won't crack, chip, or break like glass liners.

| Liner Type<br>(5.2 mm ID x 6.3 mm OD x 78.5 mm) | 5-pk.<br>cat.# | 25-pk.<br>cat.# |
|---|----------------|-----------------|
| Cyclo Single Taper                              | 20974          | 20975           |
| Single Taper                                    | 21702          | 21703           |
| Cyclo   | 20726          |                 |
| Split/Splitless w/Deactivated Wool              | 21700          | 21701           |