


it's a **fact****Uniliner® Liner for 1/4-Inch Packed Injection Port Conversion**

- Reduces solvent tailing.
- Versatile—0.53mm ID version can be used in the direct (DI) or on-column (OC) injection mode.
- Incorporates a gentle taper that seals the column and reduces dead volume in direct injection mode.
- Available in various designs.

On-column injections can be performed only with 0.53mm ID columns because 26-gauge needles do not fit into the bore of 0.32mm ID columns, or into the Uniliner® liner taper.

Description	Column ID Injection Mode*	ea. cat.#	5-pk. cat.#
Uniliner® Liner (small buffer volume chamber 60mm long, for injections ≤2µL)	0.53mm ID DI or OC	20902	20903
Uniliner® Liner (large buffer volume chamber 85mm long, for injections ≤4µL)	0.32 & 0.53mm DI only	20308	20309
	0.53mm DI or OC	20301	20305
Cyclo-Uniliner® Liner (for active, dirty samples)	0.32 & 0.53mm DI only	20319	20320
Open-Top Uniliner® Liner (packed with wool)	0.32 & 0.53mm DI only	20315	20316
Low Volume/Purge & Trap Uniliner® Liner (1mm ID x 5mm OD: use in 1/4" injection ports to troubleshoot purge & trap units)	0.32 & 0.53mm DI only	20307	20314
Uniliner® Liner Adaptor (required for installing Uniliner® liners in 1/4" injection ports)	Includes 1/4-inch nut & graphite ferrule, 1/16-inch nut, and 0.8mm ID graphite ferrule.		
	For injection ports <8cm	Stainless Steel 20310	Siltek® Treated 22282
	For injection ports 8-15cm	20311	
	For Shimadzu	20312	
Ferrules for Uniliner® Liner Adaptor	cat.# 20234 (5-pk.)		

*DI = direct injection, OC = on-column injection

Note: a Uniliner® liner must be used with a Uniliner® Liner Adaptor (cat.# 20310 or 20311) for 1/4-inch injection ports. Remember to include a liner adaptor when ordering a Uniliner® liner, unless you are purchasing replacement Uniliner® liners.

tech tip**Minimizing Backflash**

Backflash occurs when the volume of the sample vapor exceeds the buffer volume of the injection liner. This phenomenon causes poor reproducibility, tailing analyte peaks, a broad solvent peak, ghost peaks, and nonlinear responses. You can minimize backflash by using a solvent that has a low expansion volume, injecting less sample, installing an injector liner with a larger volume, or reducing the injector temperature.

