

Direct Injection Liner Adaptor

(cat.# 21303). Use with Direct Injection (DI) Glass Inserts—cat.# 20967, 20968, 20969; or with DI Uniliner® Liners—cat.# 20964, 20965, 20966.

Overview

This direct injection (DI) liner adaptor converts Agilent 5890 ¼-inch packed column injection ports to allow the use of 0.25, 0.32, or 0.53mm ID capillary columns*. It is installed similarly to Agilent's ¼-inch injection port liner that uses disposable glass inserts (Agilent part# 19244-80540). Restek's liner adaptor, DI glass inserts, and DI Uniliners® are interchangeable with original Agilent equipment.

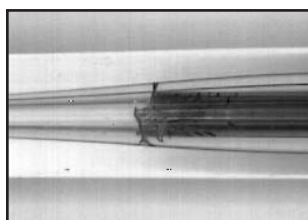
*0.25 and 0.32mm ID capillary columns can only be used with Restek DI Uniliners® (cat.# 20964, 20965, and 20966).

Installation Instructions

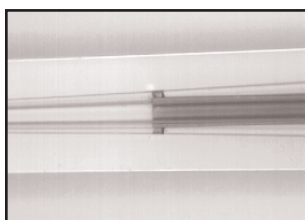
1. Insert the liner adaptor into the ¼-inch injection port and allow approximately a 1mm gap at the top of the injection port. Tighten the liner adaptor onto the port using the ¼-inch graphite ferrule about ¼-turn past finger tight.
2. Remove the septum nut assembly from the top of the injection port and carefully slide the glass insert or Uniliner® liner into the liner adaptor. Replace the septum nut assembly and install a new septum.
3. Cut approximately 10cm from each column end using a ceramic scoring wafer (cat.# 20116) or a sapphire scribe (cat.# 20182). Point the column end down to prevent glass shards or ferrule fragments from falling inside the column bore. Next, slide the ⅛-inch stainless steel nut, followed by the 0.8mm ID graphite ferrule (both included) onto the column end. (Purchase ferrules for 0.4 or 0.5mm OD columns separately.)
4. Cut an additional 10cm from the column inlet end. Closely examine the column end with a pocket magnifier (cat.# 20124) to make sure that the cut is square. Failure to obtain a square cut creates an inadequate seal and results in a tailing solvent peak.

5. Insert the column end into the liner adaptor. When using the standard glass inserts, install the column approximately 1cm from the back of the ⅛-inch nut. With the DI Uniliner® liner, insert the column until it gently touches the Press-Tight® region at the base of the liner and then pull back approximately 1mm*. Tighten the ⅛-inch nut and ferrule approximately ¼-turn past finger tight. Loosen the ⅛-inch nut and push the column until it touches the Press-Tight® region then retighten the ⅛-inch nut. The column should be held firmly by the graphite ferrule and not slide freely when gentle downward pressure is applied.
6. Turn on the carrier gas and set the flow rate approximately 5 to 10cc/min. Determine the optimum flow rate for your particular analysis. If the flow rate is near optimum linear velocities (20cm/sec. for He or 40cm/sec. for H₂), resolution is improved, but tailing of the solvent peak and early eluters is more prevalent. We recommend running a flow rate twice the optimum linear velocity for the DI Uniliner® and four times the optimum linear velocity for the glass insert. (See Restek's online Column Installation Guide at www.restek.com/guide_cap.asp for a description on how to set linear velocity.)
7. Confirm a leak-free installation by using the Restek Leak Detector (cat.# 22839). Usually a leak-free connection is assured if the column does not move up or down with moderate force. Do not use liquid leak detectors because they may contaminate or damage the column.
8. Install the column outlet according to the make-up gas kit instructions or GC instrument manual.
9. Perform the methane and solvent peak tests as described in Restek's online Column Installation Guide (www.restek.com/guide_cap.asp) to confirm installation integrity prior to running samples.

**Note, pushing the DI Uniliner® liner against the top of the injection port will not leave enough room to seat the ferrule and will cause the column end to crush as the nut is tightened. If the column end becomes crushed, broad tailing solvent peaks will result. Always leave a 1mm gap between the top of the DI Uniliner® liner and the septum nut assembly before tightening the column ferrule.



Improper installation



Proper installation

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Call Technical Service at 800-356-1688 or 814-353-1300, ext. 4 (or your Restek representative) if you have any questions about this product or any other Restek product.



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