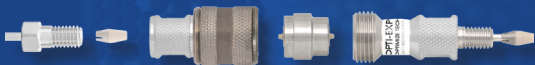


HALO®



UHPLC GUARD
CARTRIDGES
INSTRUCTIONS

HALO® UHPLC GUARD CARTRIDGES INSTRUCTIONS

Thank you for purchasing the HALO® line of UHPLC guard columns. These finger-tight, direct-connect units represent the latest in fittings and column protection technology, providing ease-of-use, high column performance and utility at pressures up to at least 600 bar.

The guard cartridge holder, guard column hardware and titanium hybrid ferrules are manufactured for HALO by Optimize Technologies, Inc. The self-adjusting hardware provides repeated direct zero-dead-volume connections to various 10-32 column inlet ports, including Waters, Agilent, etc.

The HALO UHPLC Cartridge Guard Column Series has been developed to provide convenient, cost-effective protection for UHPLC analytical columns. The cartridge components assemble quickly and easily to provide a high-efficiency, low-dead-

volume guard system that seals with hand tightening against operating pressures up to 9000 psi (600 bar). The spring-loaded exit fitting with integrated 1/16-inch OD tubing easily adapts the cartridge guard column for direct connection to any 10-32 column inlet port. All HALO packing materials are available in these HALO guard cartridges.

HALO UHPLC Cartridge Guard Columns provide physical (filtration) and chemical protection for costly analytical columns without compromising the very high performance of modern UHPLC columns such as HALO Fused-Core® columns or sub-2-micron particle columns. These HALO cartridge guard columns are capable of continuous use at pressures up to 600 bar with only hand-tightening. Guard cartridges are easily replaced without removing the guard column holder from the flow path.

HOW IT WORKS

The hybrid ferrule forms a leak-tight seal onto the 1/16-inch tubing when tightened into the column inlet port. The ferrule then releases when the unit is unthreaded from the inlet. The ferrule and the holder threads are designed to be robust and are intended to be used for repeat connections. The ferrule is resistant to damage from excessive tightening, however, the PEEK end will deform from repeated excessive tightening. For best results, tighten a maximum of 1/4-turn past hand-tight.

INSTALL OR REPLACE CARTRIDGE

1. Unscrew holder cap by hand.
2. Insert new, uni-directional cartridge into holder body.
3. Screw holder cap onto holder body and tighten fully by hand.

HOLDER INSTALLATION

1. Slide one hybrid ferrule onto front end of holder.
2. Thread holder body into column inlet port and tighten hand-tight while pushing body forward to bottom the 1/16-inch tube.
3. *Optional:* Wrench-tighten an additional 1/8- to 1/4-turn to assure sealing at very high pressure (> 400 bar).
4. Install the connecting tubing from the sample injector.

For technical information on these products in the U.S., call 1-800-441-7508.

For information in other countries, go to the website www.advanced-materials-tech.com.

ORDERING INFORMATION

Halo UHPLC Cartridge Guard Columns are sold in 3-packs in different chemistries and dimensions. Use the following table to order the cartridges you desire. All cartridges must be used with a cartridge holder.

HALO® 2.7 µm Fused-Core® Guard Cartridge Holder
HAL94900-001

HALO® 2.7 µm Fused-Core® Guard Columns

Description (mm)	C18	C8	Phenyl-Hexyl
2.1 x 5, 3-pack	HAL92812-102	HAL92812-108	HAL92812-106
3.0 x 5, 3-pack	HAL92813-102	HAL92813-108	HAL92813-106
4.6 x 5, 3-pack	HAL92814-102	HAL92814-108	HAL92814-106

Description (mm)	HILIC	RP-Amide	Peptide ES-C18
2.1 x 5, 3-pack	HAL92812-101	HAL92812-107	HAL92122-102
3.0 x 5, 3-pack	HAL92813-101	HAL92813-107	HAL92123-102
4.6 x 5, 3-pack	HAL92814-101	HAL92814-107	HAL92124-102