

Ghost Hunter™ Trap Column Care Guide

General Information

In Liquid Chromatography (LC) analysis, scientists often encounter ghost peak problems. The appearance of a ghost peak can cause great interference on the analysis during separation or quantification work. These ghost peaks are generally produced by impurities, buffer salts, and acid/base modifiers from the mobile phase. The ghost peak is more likely to interfere with the analysis using gradient mobile phase conditions. In general, analysts need to spend lots of time and energy to identify the cause of the ghost peak to see whether it's from the system, method conditions, such as mobile phase (methanol, water, salt, acid, or base), or the tubing.

The Ghost Hunter Trap Column is suitable for most HPLC systems. Simply install the column between the mobile phase mixer and the injector. The Ghost Hunter Trap Column will catch the impurities responsible for ghost peaks before the injection saving you time with troubleshooting and headaches.

Inspection

1. Open the column box and confirm the column type and specification.
2. Unscrew the sealing plugs from both ends of the column, and put them back into the column box for future use.
3. Make sure the arrow is in the direction of flow. Use PEEK tubing with PEEK fitting or stainless-steel fitting and tubing to connect the column in between the gradient mobile phase mixer and the injector (See Figure 1).
4. We recommend to use a smaller ID tubing (0.25mm, or 0.010") with shorter length to reduce dead volume.

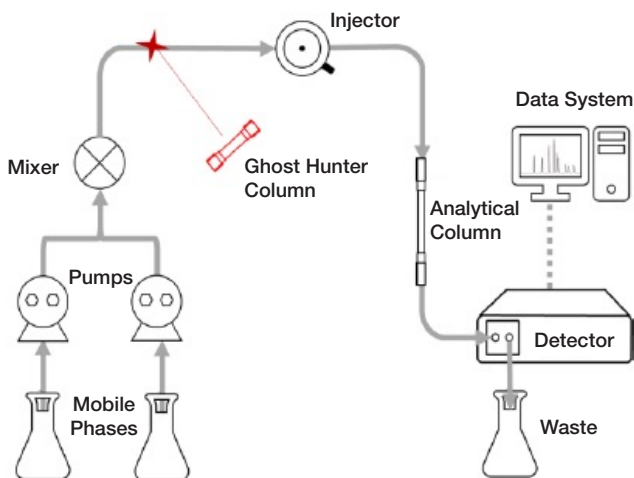


Figure 1. Ghost Hunter Column Connections Diagram

Example of LC Conditions with Ghost Hunter Column

LC Column:	Venusil® XBP 5µm C18(L) 100 x 4.6 mm
Trap Column:	Ghost Hunter 50 x 4.6 mm
Mobile Phase A (MP A):	20 mmol/L Ammonium acetate, pH 4.0
Mobile Phase B (MP B):	Acetonitrile
Gradient:	0-5 min, 5%-60% MP B; 5-10 min, 60%-80% MP B; 10-15 min, 80% MP B; 15-15.01 min, 80%-5% MP B; 15.01-25 min, 5% MP B.
Flow rate:	1.0 mL/min
Temperature:	28 °C
Detection:	UV @ 280 nm

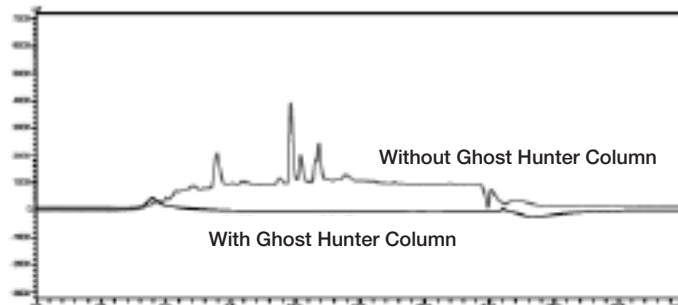


Figure 2. Comparison of the Blanks with and without the Ghost Hunter Trap Column

Pressure Limits

The maximum pressure limit for this Ghost Hunter column is 350 bar. However, running at this pressure limit for long time may compromise column longevity, so we recommend to use the ghost hunter column under 200 bar.

Tips for Extending Column Lifetime

1. Install the Ghost Hunter Trap Column making sure that the arrow is in the direction of flow. Please do not reverse the flow to use the column.
2. The Ghost Hunter Trap Column is shipped in 100% methanol. If phosphate or other buffer salts are used, please add water first to avoid salt precipitation.
3. If an ion pair reagent is added to the mobile phase, the Ghost Hunter Trap Column may adsorb it affecting the retention time and peak shape of targeted analyte.
4. The Ghost Hunter Trap Column can only remove the ghost peak caused by impurities in the mobile phase before the injection. It cannot remove all the impurities.
5. The Ghost Hunter Trap Column is consumable, whose lifetime is dependant upon chromatographic conditions and solvent purity. If the trap column is not performing properly, it is recommended to replace it right away.
6. When connecting the Ghost Hunter Trap Column to the HPLC system, do not overtighten the fitting, or it might not be able to be removed from the trap column. It is recommended to use the proper fitting to connect the Ghost Hunter Trap Column to the instrument.

Have additional questions about the Ghost Hunter Trap Column? Chat LIVE with our technical experts www.phenomenex.com/chat

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