

Prevention of Ghost
Peak Interferences
from Mobile Phases

Ghost Hunter Trap Column

Save your Method from Ghost Peaks

During LC analysis, ghost peaks are often encountered, which interfere with the separation or quantification of target compounds. These ghost peaks are generally caused by impurities in the mobile phase, such as those introduced by added buffer salts, acids, and bases, which can more easily interfere with analysis during gradient elution. Traditionally, each component of the mobile phase, including methanol, water, buffer salts, acids, bases, and instrument pipelines are checked, one by one. This process is time-consuming and labor-intensive.

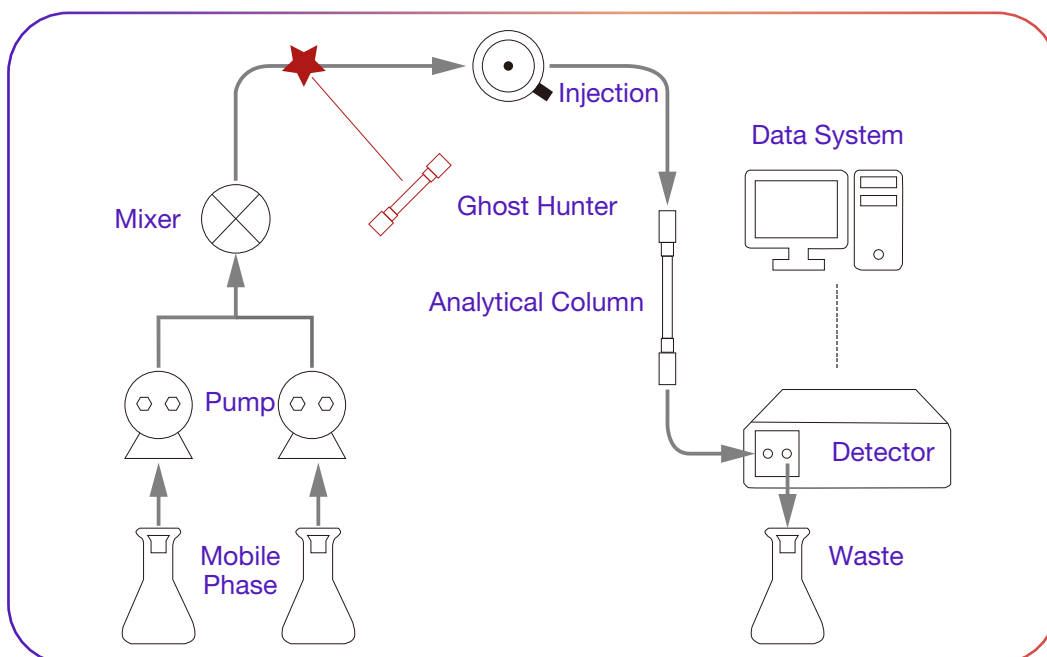
To address this challenge, Agela Technologies introduced the Ghost Hunter, a ghost peak trap column, providing chromatographers with an effective tool to remove ghost peak interference. The Ghost Hunter column is stable in most organic solvents and aqueous buffers over a wide pH range. This innovative column helps eliminate the interference of ghost peaks in the verification of experimental methods and the analysis of trace substances, significantly reducing actual test time and improving work efficiency. It has a unique adsorption material with high surface activity that effectively absorbs a variety of nonpolar and polar organic impurities. This reduces the presence of impurities in the mobile phase and minimizes the occurrence of ghost peaks, ultimately extending the life of both the column and the instrument.

A Ghost Hunter Column:

- Consistently captures and removes ghost peaks
- Resistance to water and organic solvents
- Extends column and instrument lifetime
- Minimizes efforts in data analysis



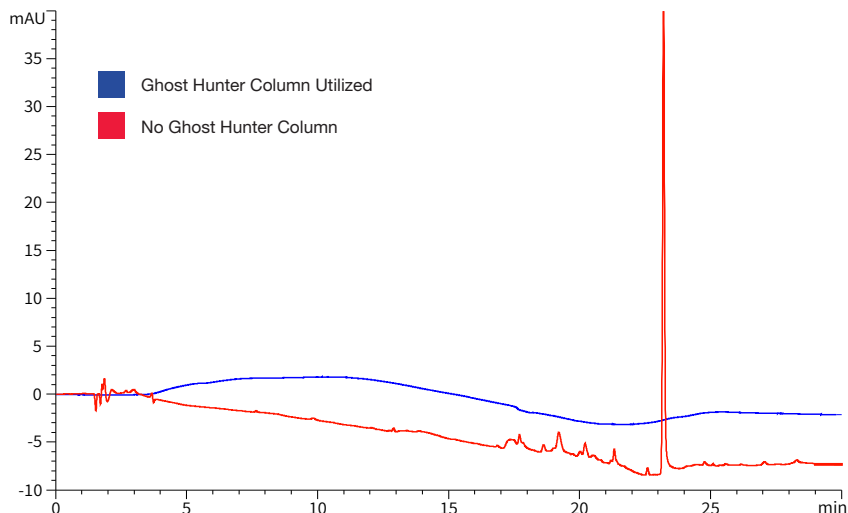
Easy to Install



A Ghost Hunter ghost trapping column needs to be installed after the liquid mobile phase. The impurities that cause ghost peaks are removed, saving valuable time.

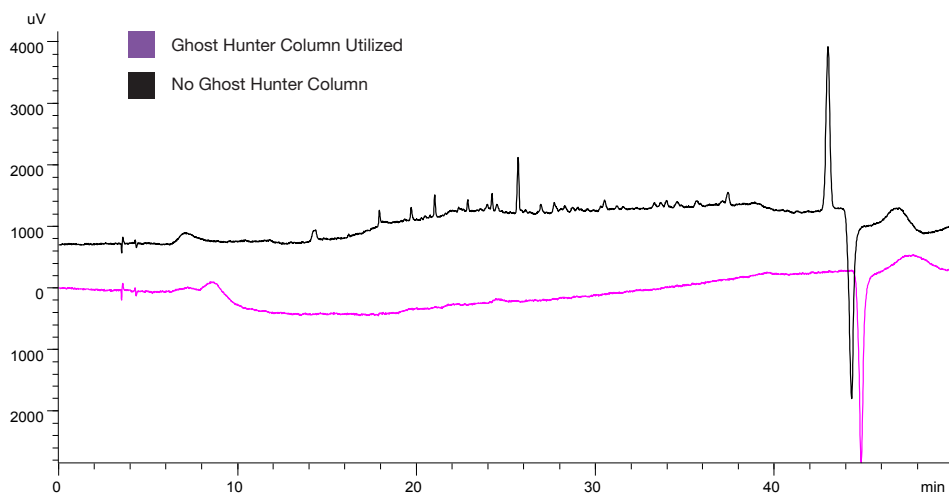
Prevention of Ghost Peak Interferences from Mobile Phases

Water-Acetonitrile Mobile Phase



Column:	Venusil® 5 µm XBP C18(L)	
Mobile Phase:	A: Water B: Acetonitrile	
Dimensions:	250 x 4.6 mm	
Part No.:	VX952505-L	
Trap Column:	Ghost Hunter	
Dimensions:	4.6 x 50 mm	
Trap Column Part No.:	GHC0505-0	
Flow Rate:	1.0mL/min	
Detection:	UV @210 nm	
Gradient:	Time (min)	B %
	0	10
	20	90
	30	90
	30.1	10
	45	10

Comparison of the Blanks Without (Black) and With (Pink) the Ghost Hunter Trap Column



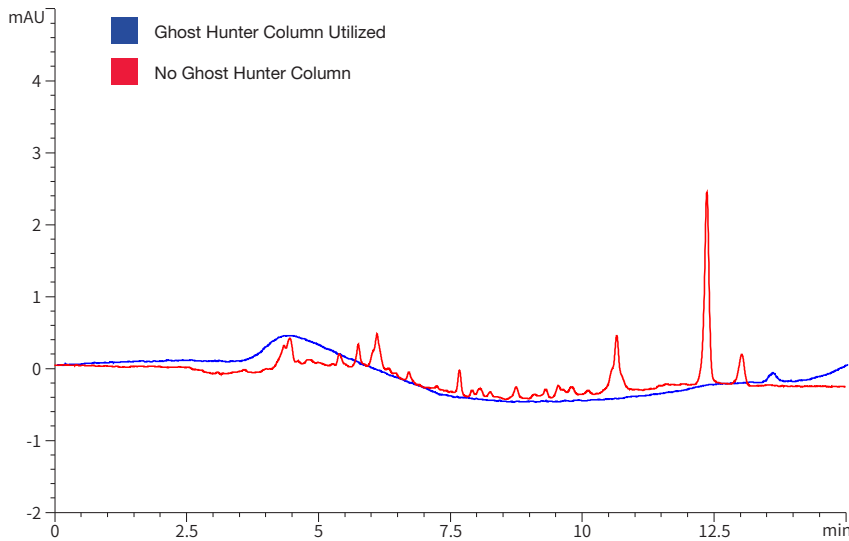
Column:	Venusil 5 µm C18 Plus	
Dimensions:	250 x 4.6 mm	
Part No.:	VPS952005-A	
Trap Column:	Ghost Hunter	
Dimensions:	4.6 x 50 mm	
Trap Column Part No.:	GHC0505-0	
Mobile Phase:	A: 20 mM Ammonium Acetate, adjusted to pH 4.0 with Acetic Acid B: Acetonitrile	
Gradient:	Time (min)	B %
	0	5
	10	20
	20	60
	35	80
	40	80
	41	5
	55	5

Flow Rate:	1 mL/min
Injection Volume:	0 µL (Blank)
Temperature:	30 °C
Detection:	UV @ 280 nm

Prevention of Ghost Peak Interferences from Mobile Phases

Sodium Dihydrogen Phosphate Mobile Phase

For the mobile phase of the phosphate system, due to the problem of the purity of the inorganic salt, the ultraviolet absorption fluctuates greatly during gradient elution, and the probability of baseline interference and ghost peaks is higher. We chose a high-concentration phosphate system with a large gradient, and found that the ghost peaks were Ghost Hunter Column Utilized



Column:	Venusil® 5 µm XBP C18(L)														
Mobile Phase:	A: 50mmol/L sodium dihydrogen phosphate (pH=4.3), B: acetonitrile														
Dimensions:	100 x 4.6 mm														
Part No.:	VX851005-L														
Trap Column:	Ghost Hunter														
Dimensions:	4.6 x 50 mm														
Trap Column Part No.:	GHC0505-0														
Flow Rate:	1.0mL/min														
Detection:	UV @ 280nm														
Gradient:	<table><thead><tr><th>Time (min)</th><th>B %</th></tr></thead><tbody><tr><td>0</td><td>5</td></tr><tr><td>5</td><td>60</td></tr><tr><td>10</td><td>80</td></tr><tr><td>15</td><td>80</td></tr><tr><td>15.1</td><td>5</td></tr><tr><td>25</td><td>5</td></tr></tbody></table>	Time (min)	B %	0	5	5	60	10	80	15	80	15.1	5	25	5
Time (min)	B %														
0	5														
5	60														
10	80														
15	80														
15.1	5														
25	5														

Product Notes

1. The trapping column is stored in methanol before leaving the factory. If you use a salt system such as phosphate, please balance the transition with an aqueous mobile phase before use;
2. If an ion-pairing reagent is added to the mobile phase, the ghost peak trapping column may adsorb it, thereby weakening the effect of the ion-pairing reagent and affecting the retention and peak shape of the target;
3. The trapping column is a consumable. The actual service life is related to the chromatographic conditions and solvent purity. If the trapping effect becomes poor, it is recommended to replace it in time.
4. When connecting the trapping column to the liquid phase instrument, it is recommended to control the locking force of the Luer connector. If the force is too high, it may be stuck. It is recommended to use a two-way interface to connect the trapping column and the instrument to effectively Avoid getting stuck.

Ordering Information

Description	Size	Unit	Part No.
Ghost Hunter Trap Column	4.6 × 50 mm	1/pk	GHC0505-0

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