PUREPHASE SCIENTIFIC

Advanced Scientific & Chromatography Solutions

GhostTrap™ Column

Eliminate Ghost Peaks. Protect Your Analysis.

The Challenge

In liquid chromatography analysis, ghost peaks are almost inevitable, especially when using buffer salts or acidic additives in gradient elution, which can easily interfere with the separation or quantification of trace or ultra-trace substances. Once ghost peaks emerge during method development, their elimination requires analysts to invest significant time and effort—a particularly challenging task.

These unwanted signals can:

- Interfere with trace and ultra-trace analysis
- Complicate method development
- Delay validation timelines
- Reduce analytical confidence

GhostTrap™ Column

The Solution: GhostTrap™

GhostTrap™ is a precision-engineered mobile phase purification column designed to capture trace-level impurities before they reach the analytical column.

It effectively removes contaminants originating from:

- Solvents and buffer systems
- Mobile phase additives and modifiers
- System tubing, mixers, and fluidic components

The result:

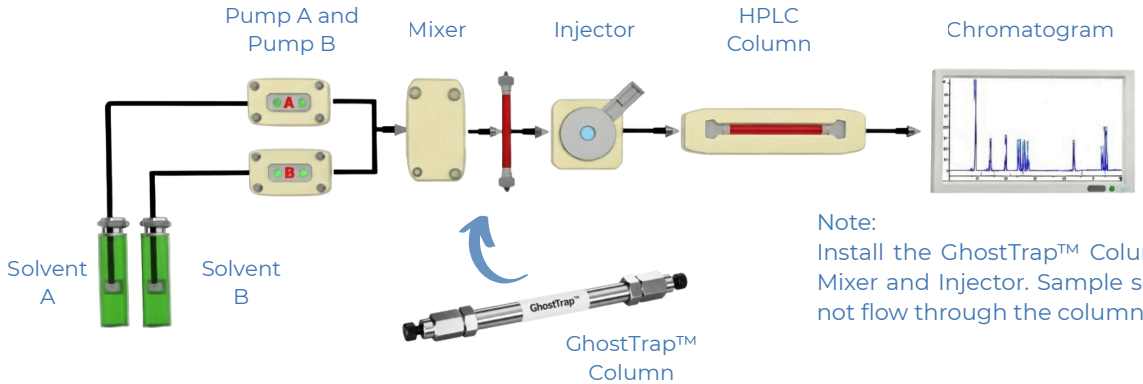
- Cleaner, more stable baselines
- Enhanced analytical reproducibility
- Reduced method development time
- Greater confidence in critical data

- ✓ Eliminates Ghost Peaks at the Source
- ✓ Enhances Ultra-Trace Analysis Accuracy
- ✓ Reduces Method Development Time
- ✓ Protects Analytical Columns from Contaminant Build-up
- ✓ Compatible with Major HPLC & UHPLC Systems
- ✓ Improves Baseline Stability During Gradient Runs
- ✓ Minimizes Background Noise and Signal Interference
- ✓ Ensures Consistent and Reproducible Results
- ✓ Extends Analytical Column Lifetime
- ✓ Simple Inline Installation — No System Modification Required

Installation Configuration

GhostTrap™ Column is specifically engineered to eliminate trace impurities from solvents, including organic mobile phases, ensuring a cleaner and more stable chromatographic baseline. Designed for reverse-phase gradient chromatography, the column is installed between the gradient mixer and the Injector. It effectively removes contaminants originating from the mobile phase while also capturing residual impurities from tubing, mixer components, and the fluidic path.

The result is significantly reduced ghost peaks, improved baseline stability, and enhanced analytical reliability.



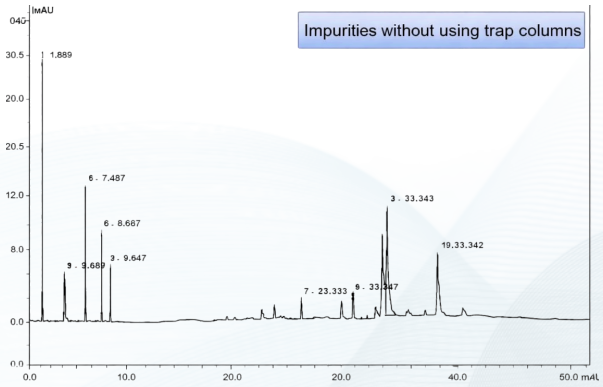
Note:
Install the GhostTrap™ Column between Mixer and Injector. Sample solution must not flow through the column.

Important: Sample solution must not pass through GhostTrap™.
Note: Installation introduces a delay volume equivalent to the internal volume of the trap column.

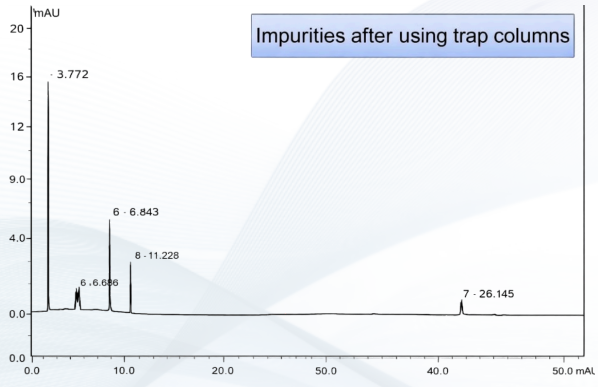
Performance Demonstration

Example Analytical Conditions

Column: OmniPor™ C18, 4.6 × 250 mm, 5 µm
Mobile Phase A: 25 mM phosphate buffer (pH 4.0) / acetonitrile (9:1)
Mobile Phase B: Water / acetonitrile (1:9)
Flow Rate: 1.0 mL/min
Detection: UV 210 nm
Temperature: Ambient



Without GhostTrap™



With GhostTrap™

Performance Evaluation

Comparative analysis demonstrates that the installation of the GhostTrap™ column effectively eliminates ghost peaks when compared to systems operated without a trap column. Even after more than 600 consecutive injections, no recurrence of ghost peaks was observed, confirming the column's sustained performance.

These results validate the high adsorption efficiency and robust loading capacity of GhostTrap™, ensuring reliable impurity capture across multiple analytical cycles.

Part Number	Column Dimensions (mm)	Max Pressure	Packaging
GT4650	GhostTrap™ 4.6 X 50mm	40MPa	1pc / pk
GT4050	GhostTrap™ 4.0 X 50mm	40MPa	1pc / pk
GT3050	GhostTrap™ 3.0 X 50mm	40MPa	1pc / pk
GT2150	GhostTrap™ 2.1 X 50mm	40MPa	1pc / pk
GT2133	GhostTrap™ 2.1 X 33mm	40MPa	1pc / pk

CONTACT US

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