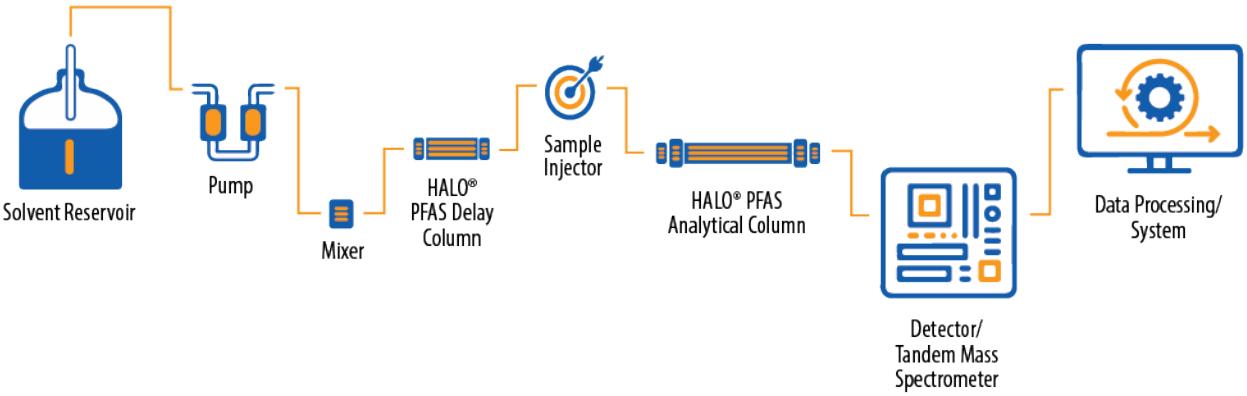
HALO® PFAS Delay, 2.7 µm Column Care & Use Sheet

Description

HALO® PFAS Delay is a high-performance liquid chromatography column based on Fused-Core® particle design. The highly retentive endcapped silane of the HALO® PFAS Delay column provides high retention of PFAS compounds across various mobile phase conditions and is used to delay background instrument PFAS contamination from interference with analyzed samples. For this reason, the HALO® PFAS Delay column is placed upstream of the sample injector and after the mixer. See diagram below.



Operation Guidelines

- The direction of flow is marked on the column label.
- Reversed flow may be used to attempt removal of inlet plugging or contamination.
- A new column contains a mixture of acetonitrile and water. Initial care should be taken to avoid mobile phases that are immiscible with this mixture or could cause a precipitate.
- Water and all common organic solvents are compatible with HALO® PFAS Delay columns.
- HALO® PFAS Delay columns are best used at temperatures below 60 °C for maximum column life.
- Mobile phase pH for HALO® PFAS Delay columns is best maintained in the range of pH = 2 to 9 for maximum column stability.
- HALO® PFAS Delay columns are stable to operating pressures up to 600 bar (9000 psi).

Column Care

To maximize column life, ensure that samples and mobile phases are particle-free. The use of a HALO® PFAS Delay column is recommended to be placed before the sample injector to delay PFAS system contamination. The 2-micron porosity frits on HALO® PFAS Delay columns are less subject to plugging than are the 0.5-micron frits typically used with other small-particle columns. Should the operating pressure of the column suddenly increase beyond normal levels, reversing the flow direction of the column may be attempted to remove debris on the inlet frit.
To remove strongly retained materials from the column, flush the column in the reverse direction with very strong solvents such as 100% of the organic component of the mobile phase in use. A mixture (95/5 v/v) of dichloromethane and methanol is often effective at this task. Extreme cases may require the use of very strong solvents such as dimethylformamide (DMF) or dimethylsulfoxide (DMSO).

Column Storage

Long-term storage of silica-based, reversed-phase columns is best in 100% acetonitrile. Columns may be safely stored for short periods (up to 3 or 4 days) in most common mobile phases. However, when using buffers, it is best to protect both the column and the HPLC equipment and remove the salts by flushing the column with the same mobile phase without the buffer (e.g., when using 60/40 ACN/buffer, flush the column with 60/40 ACN/H_2O) to eliminate any danger from corrosion from the salts while providing rapid re-equilibration of the column with the original mobile phase.
Before storing the column, the end-fittings should be tightly sealed with the end-plugs that came with the column to prevent the packing from drying.

Safety

- **HPLC columns are for laboratory use only. Not for drug, household, or other use.**
- Users of HPLC columns should be aware of the toxicity or flammability of the mobile phases chosen for use with the columns. Precautions should be taken to avoid contact and leaks.
- HPLC columns should be used in well-ventilated environments to minimize concentration of solvent fumes.

Technical Support

For technical support on this product, please contact us at support@advanced-materials-tech.com or your local HALO® distributor.

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www.fused-core.com

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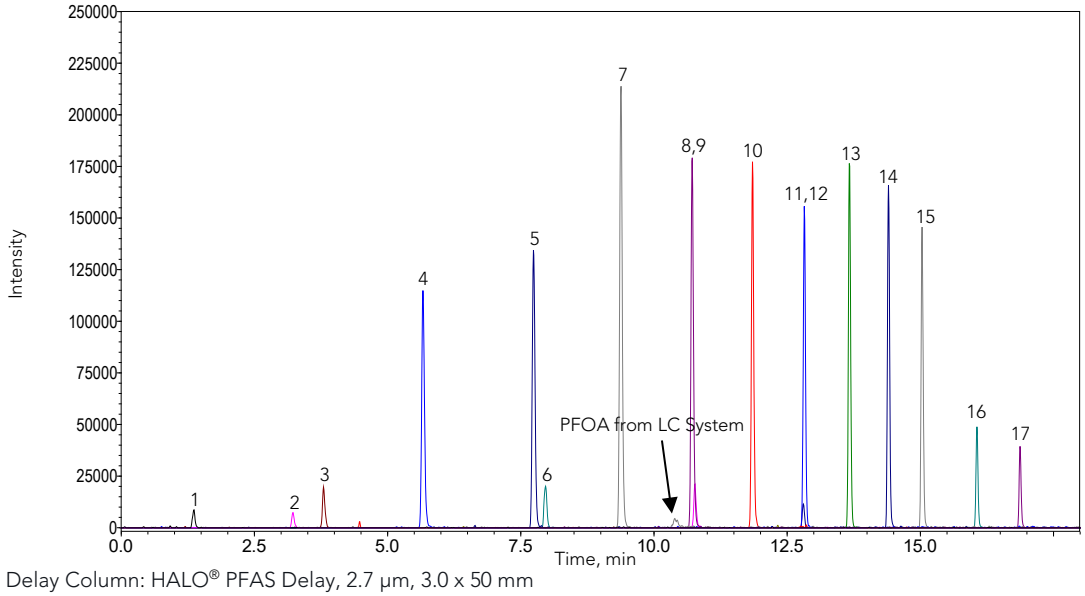
Example HALO® PFAS Analysis Highlighting Delay Column Utility



Peak Identities

1. PFBA
2. PFPeA
3. PFBS
4. PFHxA
5. PFHpA
6. PFHxS
7. PFOA
8. PFNA
9. PFOS
10. PFDA
11. PFDS
12. PFUnDA
13. PFDoDA
14. PFTrDA
15. PFTeDA
16. PFHxDA
17. PFOcDA

Delay Column: HALO® PFAS Delay, 2.7 µm, 3.0 x 50 mm
Part Number: 92113-415
Analytical Column: HALO® PFAS, 2.7 µm, 2.1 x 100 mm
Part Number: 92812-613
Mobile Phase: 10 mM Ammonium Acetate [A]; Methanol [B]
Gradient: 33-98% B in 18 min
Flow Rate: 0.4 mL/min

Initial Back Pressure: 415 bar
Temperature: 35 °C
Detection: Negative ESI MRM
Injection Volume: 1 µL
Sample: PFAC-MXB (Wellington Laboratories)
Concentration: 100 ppb in 96% Methanol

For method specific details or questions about your specific HALO® PFAS lot, please contact us at support@advanced-materials-tech.com.

MRM 413.0 > 369.0 for PFOA.

The prevalence of PFOA is commonly observed as an instrument materials contaminant.