

## Tip for working with plasma samples and Cogent TYPE-C HPLC columns - Tips & Suggestions

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Analyzing plasma extracts presents unique challenges due to the complexity of biological matrices. When using Cogent TYPE-C™ silica-based HPLC columns, proper care and solvent selection are essential for maintaining column performance and ensuring reproducible results.

Here are some key tips and suggestions:

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### 1. Column Washing Between Injections

To maintain column cleanliness and prevent buildup from plasma components:

- Use a 50:50 methanol / deionized (DI) water mixture as a wash solvent.
  - For a 4.6 mm × 250 mm column, a flow rate of 0.5 mL/min for 20–30 minutes is typically sufficient.
  - This helps remove residual proteins and other matrix components that may accumulate over time.
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### 2. Solvent Recommendations for LC-MS Applications

When working with LC-MS and biological samples:

- Use 50:50 methanol / DI water as your A solvent. This composition not only supports good chromatographic performance but also helps clean the column between runs.
  - For samples with high lipid content, consider switching to 50:50 DI water / isopropanol (IPA) as the A solvent. IPA is more effective at solubilizing and removing lipophilic compounds that can otherwise foul the column.
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### 3. Why This Matters

Cogent TYPE-C™ columns are uniquely designed for aqueous normal phase (ANP). Their surface chemistry is highly resistant to hydrolysis and ideal for handling complex biological matrices—but regular maintenance is key to preserving performance and extending column life.

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