Retention And or Peak Shape for Citric Acid has Changed Compared to Data from a Previous HPLC Run - Tips & Suggestions

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Citric acid analysis using LCMS can be compromised due to the presence of iron in the system.

When iron is present, it can cause peak distortion for compounds like citric acid. A possible solution to this problem is to use a small concentration of a chelating agent *(EDTA)* in the mobile phase/sample diluent to sequester the iron ions. Generally, we use 5-10 microM EDTA for this problem.

In addition, another possible solution: Flush the column overnight at a low flow rate *(0.1 mL/min)* with 50:50 MeOH / DI water. Then in the morning, switch to whatever mobile phase you want to use and let the system equilibrate for 30 minutes before starting your runs. This should bring the column to a state where it will run for many injections very reproducible. The only exception to this is where acid and ammonium additives were used on the same column. We recommend that if you want to use both types of buffers, you should have two columns.

In both of the suggestions above, it is highly recommended to use our metal free, Cogent HPLC columns that are coated to prevent any leaching or interaction with the stainless-steel frits or column hardware.

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