

Citric acid retention and peak shape has changed compared to data from a previous run what happened - FAQ

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 this. 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 μ M EDTA for this problem.

In addition, another possible solution is as follows: 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 reproducibly.

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.