

Retention Times Vary from Instrument to Instrument - Tech Information

Date: 2-APRIL-2012 Last Updated: 30-NOVEMBER-2025

Matching Retention Times Across Different HPLC Systems

When trying to replicate retention times from published methods or application notes, keep in mind that **gradient conditions often need adjustment**. Instrument-specific factors such as dwell volume, pump accuracy, and system plumbing (tubing dimensions) can significantly influence retention behavior.

Because these variables differ between systems, achieving identical retention times may be nearly impossible. Instead, focus on alpha values (selectivity) or relative retention times, which provide a more reliable measure of precision and reproducibility.

This consideration is especially important when duplicating methods from our Chrom Resource Center and or website application notes.



Printed from the Chrom Resource Center
Copyright 2025, All Rights Apply
MicroSolv Technology Corporation
9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900
Fax: (910) 769-9435
Email: customers@mtc-usa.com
Website: www.mtc-usa.com