



How a pulse from an HPLC pump affect the column and its performance - Tech Information

If your HPLC pump produces a “pulse” (i.e. cyclic fluctuation in flow/pressure), this can cause problems for your results and the column you are using.

The pump will not be delivering optimally precise / accurate flow and this can cause your system to not meet system suitability criteria as well as other issues.

Sudden changes in the pressure can also cause disruption of the packed bed of the column, adversely affecting column useable life. We suggest that you use a pulse dampener in your HPLC system for this reason. One example of this is a dual piston pump where the two pistons are out of phase. The resulting flow / pressure is more constant.

Also, it is very important to never remove your HPLC column from the connectors while there is any pressure at all on the system. Removing a column under pressure can cause a shock to the packed bed causing disruption.

In order to verify the precision / accuracy of your pump, you can use our HSQ™ Kit to qualify it and be sure these parameters as well as many others are correct and what you expect.

Printed from the Chrom Resource Center

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Date: 07-22-2024