



CHROMATOGRAPHIC SPECIALTIES INC.

EASY HPLC SOLVENT SAVINGS

You can cut your HPLC solvent use dramatically by scaling back on the diameter or particle size and length of your columns.

Diameter

By reducing the diameter of your column and adjusting your flow rate in proportion to the square of the internal diameters, you can save significant solvent without affecting resolution. A very useful switch is from a 4.6 mm ID column to 3.0 mm ID. This reduces the volumetric flow rate and your solvent costs by 50%. Method sensitivity is generally maintained, and sometimes improved – contact our Technical Team for more information.

Particle Size and Column Length

If you can reduce the particle size used in your column, you can reduce the column length by the same proportion and keep your resolution constant.

For example, a 250 mm column with a 5 μm packing and 150 mm column with a 3 μm packing will give the same resolution if the stationary phase and mobile phase chemistry remain constant.

The 150 mm column will produce the chromatogram in nearly half the time, and save you 40% on solvents. You can even run 66% more samples per day!

Combining Diameter and Length

By adjusting both the length and diameter of your column as above, you can reduce your solvent use by up to 70%. The shorter column means you can run your samples in 60% of the time, and at 50% of the flow rate.

Contact our Technical Team to review the math and find out how easy it may be for you to save significant time and costs in your HPLC lab.

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