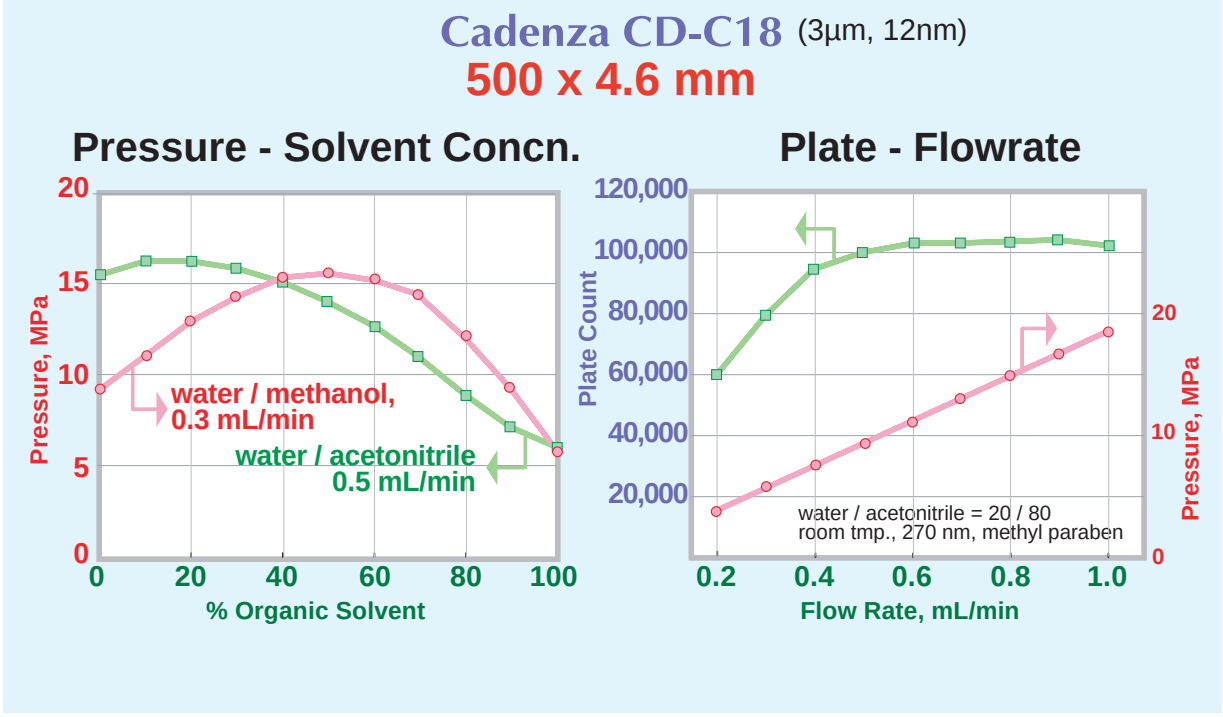
Cadenza CD-C18 500 x 4.6 mm Technical

Effects of Flow Rate and Eluent on a 100,000 Plates Column

Revolutionary 3um technology...high plates with practical level of pressure



Cadenza CD-C18 500 x 4.6mm is a high-efficiency column offering 100,000 plates per column in resolution. Researchers typically use a flow rate of 1mL/min with a 4.6mm I.D. column. In many cases with a 3um particle, this results in high pressure and difficulties for researchers. For that reason, it is necessary to lower the flow rate when using our 500mm column.

The left chart shows the relationship between column pressure and organic solvent concentration. The flow rate for acetonitrile is set at 0.5mL/min while the flow rate for methanol is set at 0.3mL/min. Every organic solvent concentration showed practical operating pressures under 20MPa (2900psi).

The right chart shows the relationship between flow rate and the number of theoretical plates. The exceptional plate count over 100,000 plates per column is maintained even at a low flow rate of 0.5mL/min. By lowering operating flow rates with our 500mm column , you can lower pressure while achieving amazing resolution.

The 3um 500mm column offers greater efficiency than connecting two 250mm columns. By employing a lower flow rate, you can achieve the precise separation unavailable from other columns on the market today.