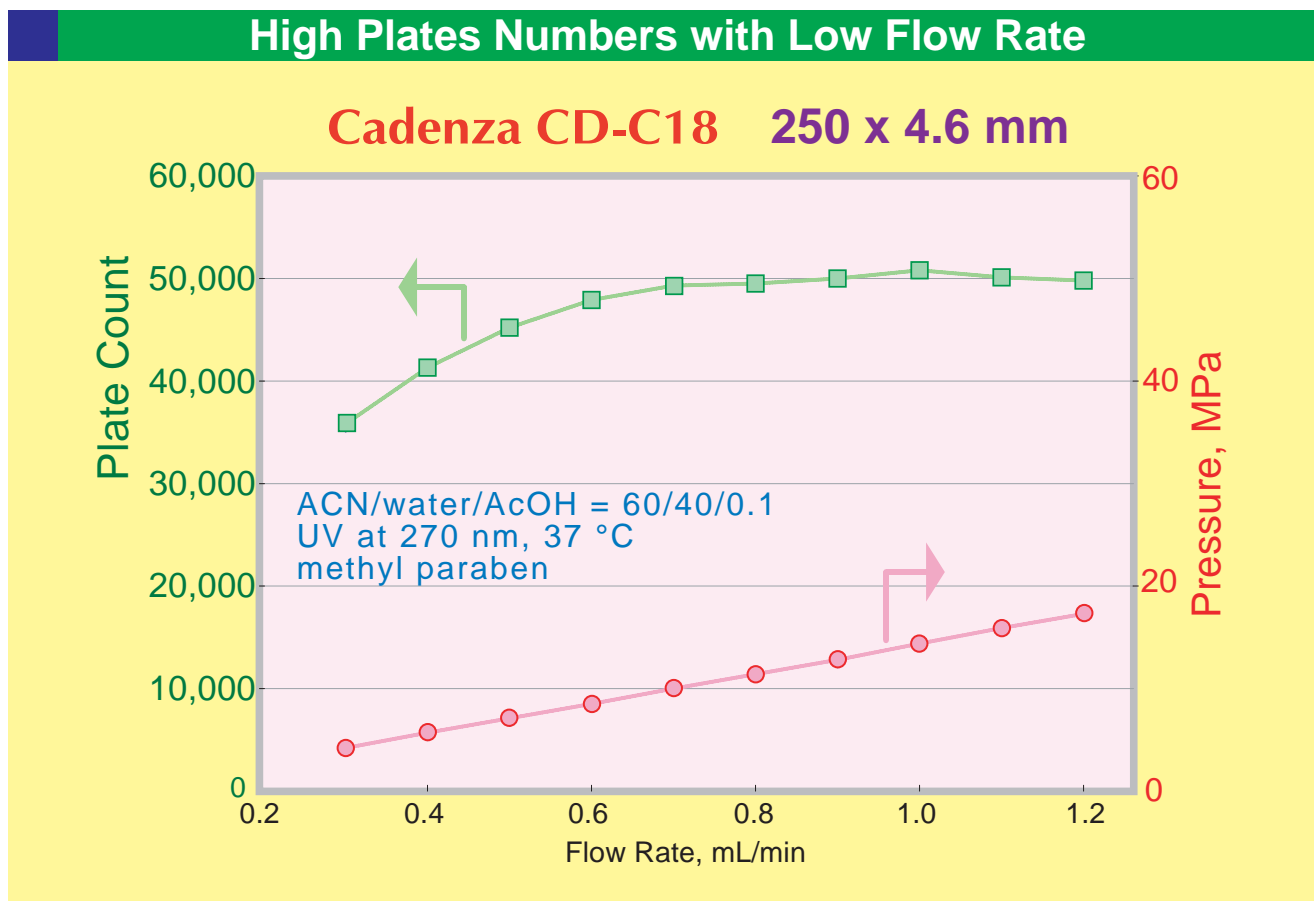


Cadenza CD-C18

250 x 4.6 mm

Technical

The relationship between plate numbers and flow rate for high-resolution columns



This chromatogram shows the relationship between plate numbers and flow rate for the high-resolution Cadenza CD-C18.

The 4.6mm diameter column customarily passes liquid at a rate of 1mL/min but the high-pressure elution composition often results in difficult working conditions for 3µm columns. This standard flow rate of 1mL/min, however, is not the best solution. Flow rate setting is an important point for material separation.

As detailed in the chromatogram, the 3µm particle in Cadenza CD-C18 offers high plate numbers even with 0.5mL/min flow rate. This low flow rate has the following additional advantages:

- 1) Lower analysis pressure
- 2) LC-ESI-MS usage even with a 4.6mm column
- 3) Decreased solvent consumption

To use higher organic solvent concentration provides improved eluting speed without decreasing plate numbers when flow rate is low for the column pressure.

Previously thought to be impossible high-resolution separation becomes possible by optimizing flow rate. Cadenza CD-C18's superior 3µm particle technology offers the world's highest plate numbers (50,000 plates/column) at 250mm.