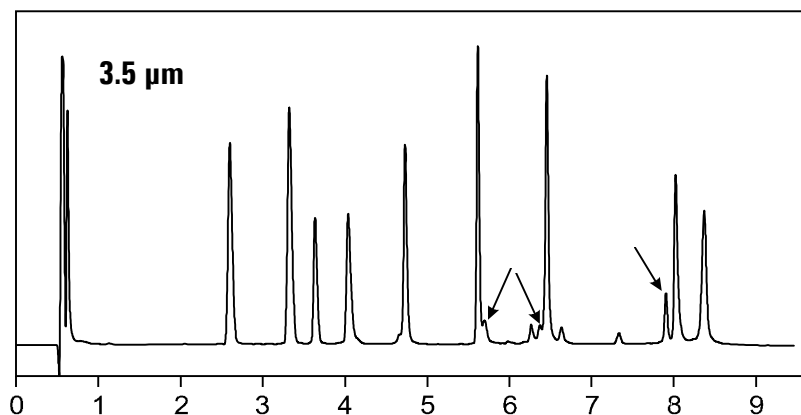
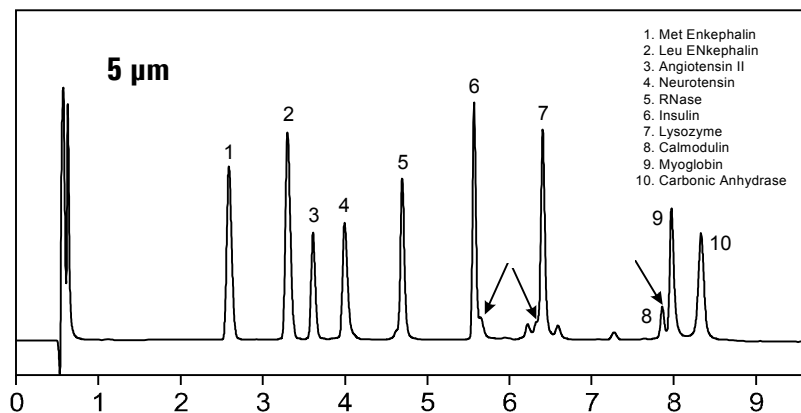


Effect of Particle Size on Column Efficiency ZORBAX 300SB-C8

Application
Technical
Robert Ricker

The particle size of a column packing affects the efficiency (theoretical plates) of a column. Smaller particle size improves efficiency of a separation without increasing run time, column length, or flow rate. The arrows illustrate regions of the chromatograms where the increase in efficiency and resolution is significant.



Conditions:
Column: ZORBAX 300SB-C8 (3.5µm; 4.6 x 50mm) (Agilent P/N: 865973-906), (5µm; experimental)
Mobile phase: A: 95:5 Water:ACN, 0.10% TFA (v/v%) B: 5:95 Water:ACN, 0.085% TFA (v/v%)
Gradient: 10-60% B in 10 minutes
Injection: 10µL, 1-6 µg protein, 1 mL/min, 35°C, Detect. UV(215 nm) micro flow cell.

Highlights

- Use of a column packing having reduced particle size can improve efficiency of a separation or, alternatively, increase loading capacity.
- ZORBAX Rx-Silicas have narrow particle-size distributions for reduced column back pressure and improved peak shape.



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