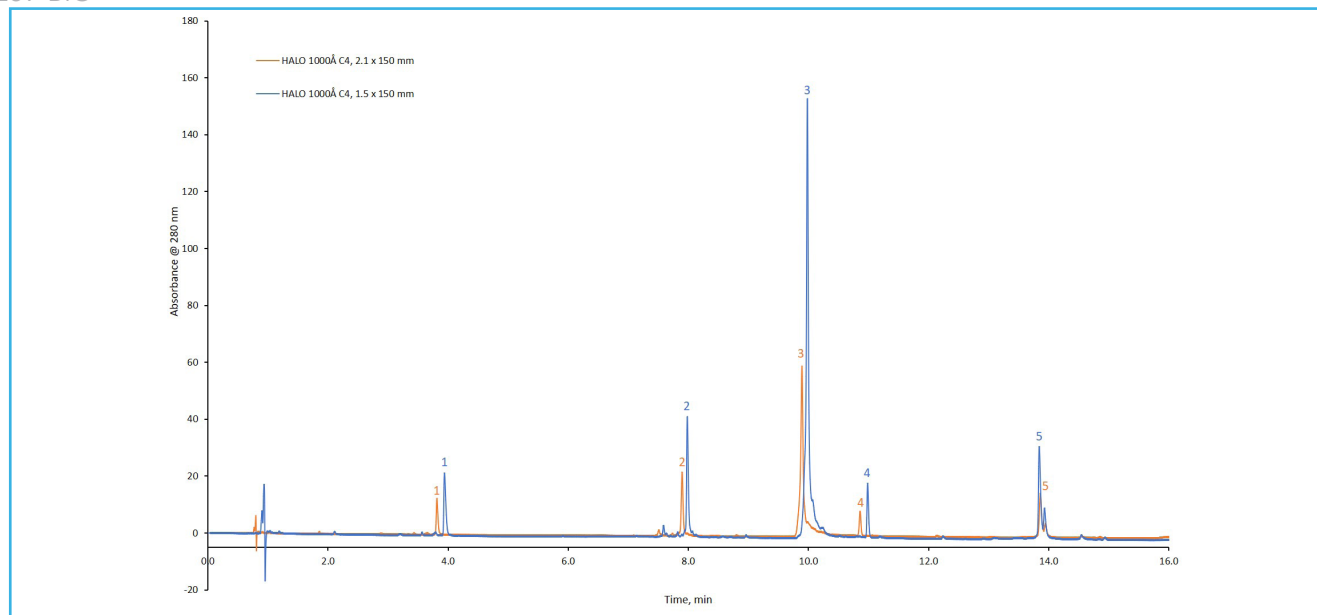




Sensitivity Increase of Mixed Proteins Through the Use of a 1.5 mm ID column

289-BIO



TEST CONDITIONS:

Column: HALO 1000 Å C4, 2.7 µm, 1.5 x 150 mm

Part Number: 9271X-714

Column: HALO 1000 Å C4, 2.7 µm, 2.1 x 150 mm

Mobile Phase A: Water/ 0.1% TFA

Mobile Phase B: 80/20 ACN/Water / 0.1% TFA

Gradient: Time (min) %B

0.00 24

15.00 57

16.00 100

17.00 100

18.00 24

Flow Rate: 0.2 mL/min for 1.5 mm

0.4 mL/min for 2.1 mm

Pressure: 228 bar/1.5 mm

264 bar/2.1 mm

Temperature: 80 °C

Detection: UV 280 nm, PDA

Injection Volume: 2.0 µL

Sample Solvent: Water

Data Rate: 40 Hz

Response Time: 0.050 sec.

Flow Cell: 1µL

Instrument: Shimadzu Nexera X2

PEAK IDENTITIES

1. Ribonuclease A
2. Lysozyme
3. SiluLite Sigma mAb
4. Alpha-lactalbumin
5. Enolase

A mix of proteins was separated using a HALO 1000 Å C4 column. The switch from a 2.1 mm to a 1.5 mm ID column gives a significant overall increase in sensitivity while maintaining similar test conditions. Optimization of the post-column tubing reduced the extra column volumes for this experiment. The 1.5 mm ID column can deliver an increase in sensitivity for separations without the investment of a specialized micro flow HPLC system.

