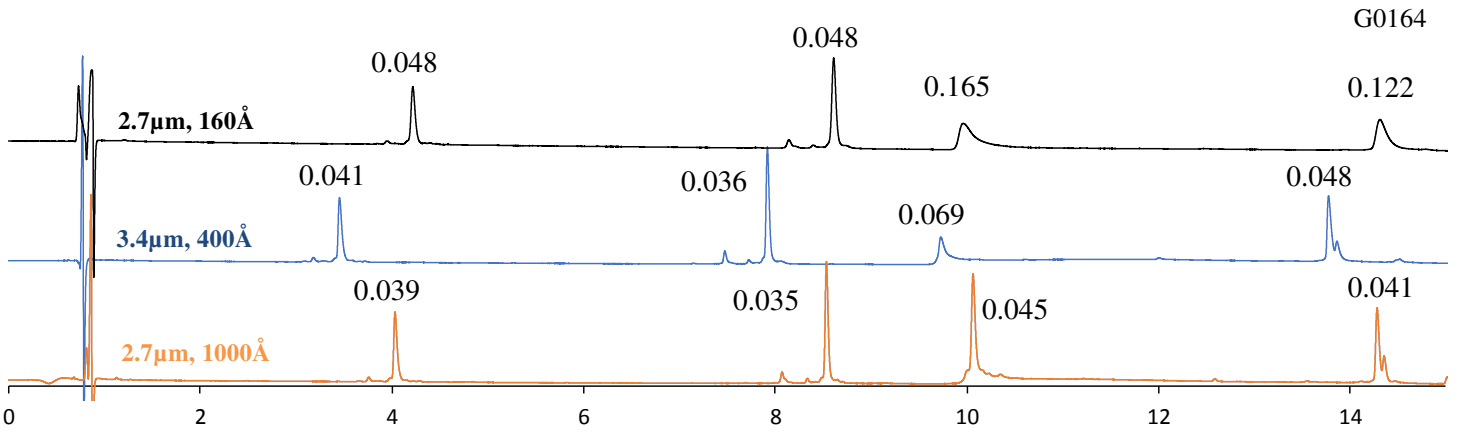
HALO | Fused-Core® Particle Technology

Application Note: 170-PR

Effect of HALO ES-C18 Pore Size on Protein Peak Shape and Width



(Superpositioned numbers are peak widths at half height in minutes)

TEST CONDITIONS:

Column: HALO ES-C18, 2.1 x 150mm
Part Number: 92122-702 (160Å)
93412-702 (400Å)
92712-702 (1000Å)
Mobile Phase A: Water (0.1% TFA)
Mobile Phase B: 80/20 Acetonitrile/ Water (0.085% TFA)
Gradient: 27–60% B in 15 minutes
Flow Rate: 0.4 mL/min
Temperature: 60°C
Detection: UV 280 nm, PDA
Injection Volume: 4 µL
Sample Solvent: Water (0.1% TFA)
Data Rate: 40 Hz
Response Time: 0.025 sec
Flow Cell: 1 µL
LC System: Shimadzu Nexera X2

PEAK IDENTITIES:

1. Ribonuclease A (13.8 kDa)
2. Lysozyme (14.4 kDa)
3. SILu™ Lite SigmaMAb Antibody (~150 kDa)
4. Enolase (46.7 kDa)

Pore size can play an important part in your HPLC separations. A range of proteins and a monoclonal antibody are separated on HALO ES-C18 160Å, 400Å, and 1000Å columns. Peak widths decrease as the column packing's pore size becomes larger, especially for the monoclonal antibody. The 160Å pore size is recommended for molecules in the range of 100 Da to 15kDa. The 400Å pore size is recommended for molecules between 2kDa to 500 kDa. The 1000Å pore size is used for molecules over 50 kDa.

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