Clarity Oligo-MS™ HPLC Columns

Rapid and Efficient LC/MS Separation for QC and Characterization

- **Core-shell particle technology provides improved speed, resolution, and sensitivity**
- **2.6 µm particles deliver increased efficiency at reduced backpressures**
- **Easily transfer quantitative LC/MS methods to any system with 2.6 µm particles**
- **1.7 µm particles boost performance of existing sub-2 µm methods**

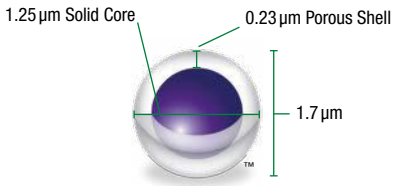
Clarity Oligo-MS, C18 columns have been engineered for the MS characterization of synthetic DNA and RNA samples. This media is based on core-shell technology which generates extremely high efficiencies due to the innovative particle design. This increase in efficiency improves the resolution between critical oligo sequences, gives higher sensitivity for easier MS quantitation, and allows for a decrease in column length for higher throughput.

Core-Shell Technology for Synthetic DNA/RNA Analysis

Clarity Oligo-MS media is not fully porous like traditional particles used for the analysis of oligonucleotides. It is a core-shell particle technology which uses a sol-gel processing technique to grow a homogeneous porous shell onto a solid core. This highly optimized process combined with uniform particle size distribution produces a column that generates extremely high plate counts.

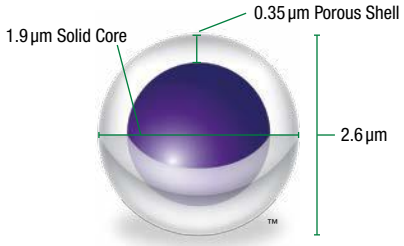
1.7 µm Core-Shell Particle

- **Reduced diffusion path maximizes efficiency**
- **Increased efficiencies compared to traditional fully porous sub-2 µm columns. Typical operating backpressures > 400 bar**



2.6 µm Core-Shell Particle

- **Reduced diffusion path maximizes efficiency**
- **Ultra-high performance on any system with Clarity Oligo-MS 2.6 µm columns**

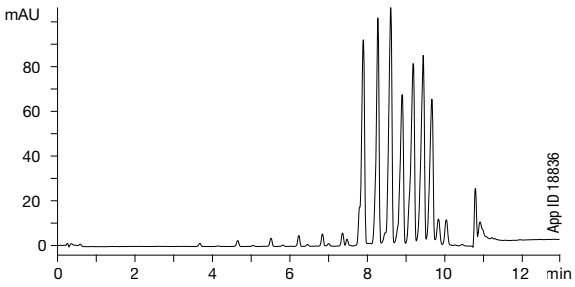


Achieve Baseline Resolution of N-1 and N+1 Oligo from Target

The high plate counts generated by the Clarity Oligo-MS material produce extremely high efficiencies and thus excellent resolution between oligonucleotides of similar length and structure. Scientists can achieve baseline resolution between synthetic oligonucleotides with just one base difference allowing easier quantitation.

Poly dT Standard (12-18mer)

Column: Clarity 2.6 µm Oligo-MS C18
Dimensions: 50 x 2.0 mm
Part No.: 00B-4479-B0
Mobile Phase: A: 100 mM HFIP / 4 mM TEA / 2 % Methanol
B: 100 mM HFIP / 4 mM TEA / 98 % Methanol
Gradient: A/B (95:5) to A/B (80:20) in 10 min
Flow Rate: 0.5 mL/min
Temperature: 50 °C
Detection: UV @ 260 nm (22 °C)
Injection Volume: 20 µL
Sample: Poly dT (12-18)



Rapid Separation of Complex Oligo Samples

Due to the high resolving power of Clarity Oligo-MS columns, high-throughput methods for the separation of complex synthetic mixtures can be developed. Using short (50 mm length) columns, impurities are separated from the peak of interest in less than 12 minutes.

Crude DNA 30mer

Column: Clarity 2.6 µm Oligo-MS C18
Dimensions: 50 x 2.0 mm
Part No.: 00B-4479-B0
Mobile Phase: A: 100 mM HFIP / 4 mM TEA / 2 % Methanol
B: 100 mM HFIP / 4 mM TEA / 98 % Methanol
Gradient: A/B (95:5) to A/B (80:20) in 10 min
Flow Rate: 0.5 mL/min
Temperature: 50 °C
Detection: UV @ 260 nm (22 °C)
Injection Volume: 20 µL
Sample: Crude DNA 30mer