



Titan™ UHPLC Columns (1.9 μm)

Outperforms other UHPLC columns with the narrowest particle size distribution of any sub-2 μm totally porous particles



Supelco® introduces Titan™ C18 UHPLC columns, based on 1.9 μm totally porous, monodisperse silica particles. These particles are the result of a newly developed, patent-pending, Ecoporous™ silica manufacturing process.

Titan delivers:

- Efficiency > 250,000 N/m, comparable to leading UHPLC columns
- Narrow particle size distribution translates to rugged, reliable performance
- A great value, available at half the cost of other UHPLC columns

Figure 1. Particle Size Distribution Comparison for Different Silicas

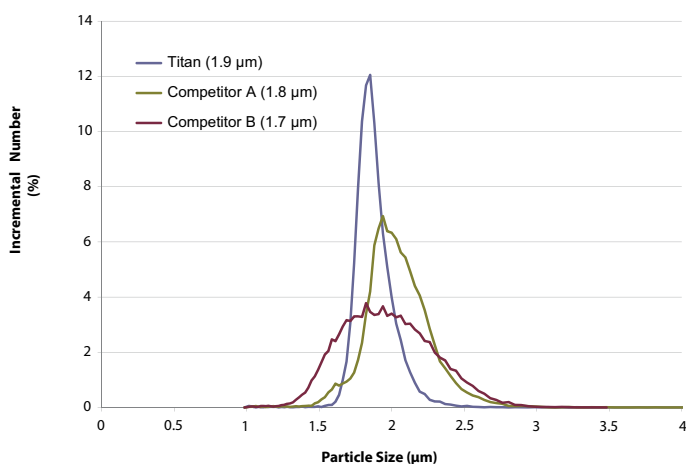


Figure 2. Titan C18 Performance Comparison in Acetonitrile

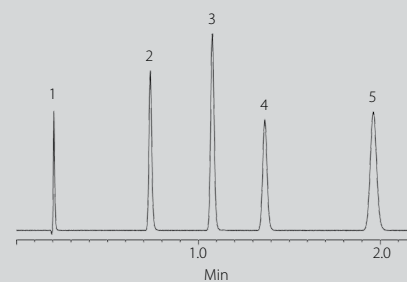
Comparison of the Titan performance to commercially available sub-2 μm columns

Dionex® 3000 (Low D tubing)

| | |
|--------------------------------|----------------|
| column: 5 cm x 3.0 mm I.D. | 1. Uracil |
| mobile phase: 60% acetonitrile | 2. Diazepam |
| temp: 35 °C | 3. Toluene |
| flow rate: 0.9 mL/min (4 mm/s) | 4. Naphthalene |
| detection: 254 nm | 5. Biphenyl |

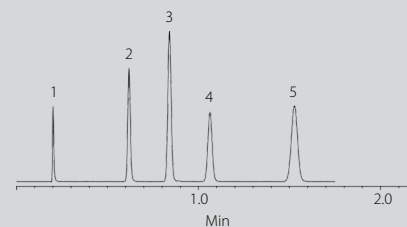
Titan C18, 1.9 μm

N= 14,710
N/m= 294,200
h= 1.75
σ= 1.05
Pressure*= 4,100psi



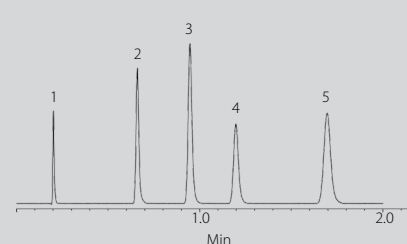
Competitor A C18, 1.8 μm

N= 9,260
N/m= 185,200
h= 3.18
σ= 1.02
Pressure*= 4,650psi



Competitor B C18, 1.7 μm

N= 9,783
N/m= 195,700
h= 2.84
σ= 1.16
Pressure*= 4,900psi



* Total System Pressure

Table 1. Titan Porous Silica Characteristics

| Particle Size* μm | Pore Diameter \AA | Surface Area m^2/g | Pore Volume cc/g | Pressure psi (bar) |
|------------------------------|----------------------------|------------------------------------|---------------------------|-----------------------------|
| 1.9 | 80 | 410 | 0.76 | 18000 (1241) |

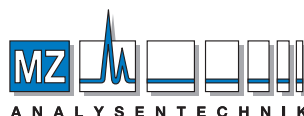
*Very narrow distribution: D (90/10) < 1.15

Ordering Information

| Description | Qty. | Cat. No. |
|---|------|----------|
| Titan C18 Columns, 1.9 μm | | |
| 2 cm x 2.1 mm | 1 | 577120-U |
| 3 cm x 2.1 mm | 1 | 577121-U |
| 5 cm x 2.1 mm | 1 | 577122-U |
| 7.5 cm x 2.1 mm | 1 | 577123-U |
| 10 cm x 2.1 mm | 1 | 577124-U |
| 3 cm x 3.0 mm | 1 | 577125-U |
| 5 cm x 3.0 mm | 1 | 577126-U |
| 10 cm x 3.0 mm | 1 | 577132-U |
| Titan C18 Guard Cartridges, 1.9 μm | | |
| 2.1 mm | 3 | 577127-U |
| 3.0 mm | 3 | 577128-U |

For more information, visit

sigma-aldrich.com/titan



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