

## Silversil

### Features of Silversil HPLC columns:

Good versatility, widely used in medicine, environment and food safety testing  
Aperture 120 Å, fits to analyze compounds, with a wider range of molecular weight, and its large aperture eliminates blockages and prolong the service life.  
Higher efficiency (theoretical plate number naphthalene > 70,000 / m)  
Lower column pressure (about 0.6 times that of conventional column)  
Symmetrical peak shape, good analytical results for acidic, basic and neutral compounds  
Excellent batch reproducibility  
Extra long service life

### Packing Spec.:

Bonded phase	Particle size	Pore size	Surface area	Purity	Carbon loading	pH range	Endcapping
Silversil C18	5 μm	120 Å	330 m <sup>2</sup> /g	>99.999	20 %	1.5-9.0	Yes
Silversil C8	5 μm	120 Å	330 m <sup>2</sup> /g	>99.999	12 %	1.5-9.0	Yes
Silversil Silica	5 μm	120 Å	330 m <sup>2</sup> /g	>99.999	—	1.5-7.5	No

### Lower pressure with higher performance

The Silversil column is designed with low column pressure to reduce the potential impact of the column pressure on the instrument and to extend the use of the column and instrument on the basis of ensuring effective separation and high resolution. The following picture shows a randomly selected one from the Silversil C18 250 x 4.6 mm, 5 μm series for efficiency test. The result showed that Silversil C18 250 x 4.6 mm, 5 μm column has a column efficiency of 78,000/m and a column pressure of only 4.7 MPa, which is lower than the conventional 250 x 4.6 mm from its competitors.

Column : Silversil C18 250 x 4.6 mm, 5 μm (Cat.No 99202)

Mobile Ph : Acetonitrile  
:Water= 65:35

Flow Rate : 1.0 mL/min

Pressure : 4.7 MPa

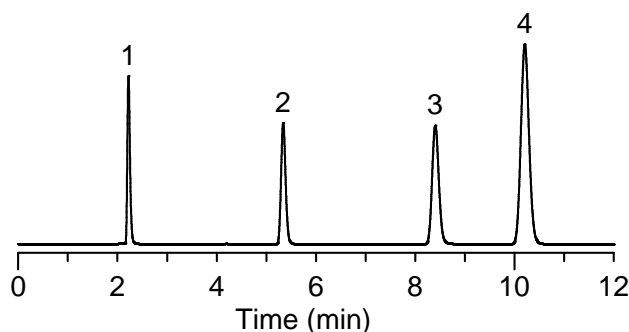
Efficiency : 78000/m

Temp : 30 °C

Detector : UV 254 nm

Sample vl : 2.0 μL

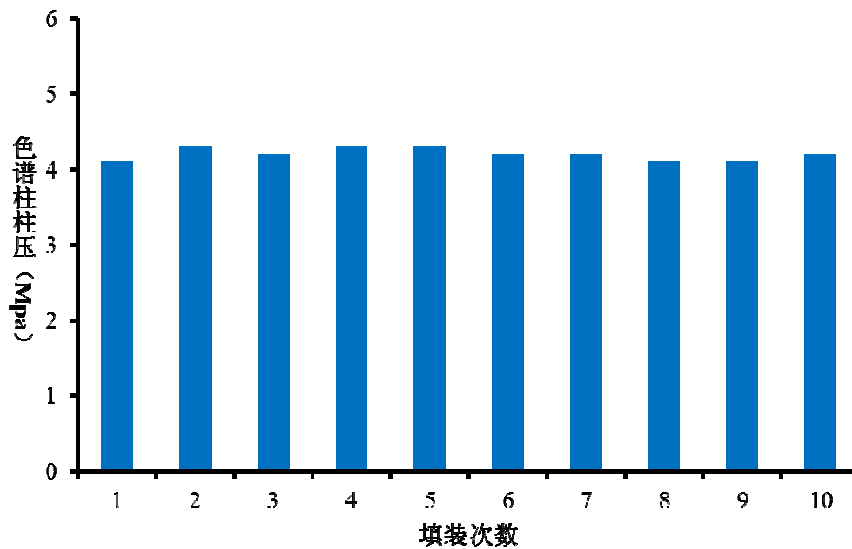
samples :  
1 · Uracil  
2 · Methyl benzoate  
3 · Toluene  
4 · Naphthalene



**The Higher Mechanical Strength, the Longer Service Life.**

When a column is applied, we often use a mobile phase to flush it. Those with poor mechanical strength will have a worse efficiency due to a long-term flushing. Silversil filler particles have been carefully optimized in terms of particle shape, particle size, and pore size. The filler has strong mechanical strength and can be used for a long time without deformation so service life of the column can be prolonged. The figure below proves the effect.

The Silversil C18 250 x 4.6 mm, 5 μm (Cat. No 99202) column was continuously packed 10 times and the column pressure did not change significantly.



**Models**

Description	Cat. No.
Silversil C18 150 x 4.6mm, 5 μm	99201
Silversil C18 250 x 4.6mm, 5 μm	99202
Silversil C18 100 x 4.6mm, 5 μm	99203
Silversil C8 150 x 4.6mm, 5 μm	99204
Silversil C8 250 x 4.6mm, 5 μm	99205
Silversil C8 100 x 4.6mm, 5 μm	99206
Silversil Silica 150 x 4.6mm, 5 μm	99207
Silversil Silica 250 x 4.6mm, 5 μm	99208
Silversil Silica 100 x 4.6mm, 5 μm	99209

## Application Notes

### Curcumin

Column : Silversil C18 250 × 4.6 mm, 5 μm (**Cat.No 99202**)

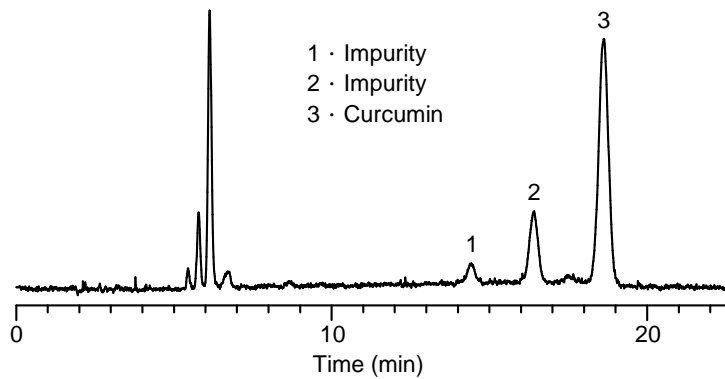
Mobile Ph : Acetonitrile  
:5% Acetic Acid =45:55

Flow Rate : 0.9 mL/min

Temp : 40 °C

Detector : UV 430 nm

Sampling : 20 μL



### Resveratrol

Column : Silversil C18 250 × 4.6 mm, 5 μm (**Cat.No 99202**)

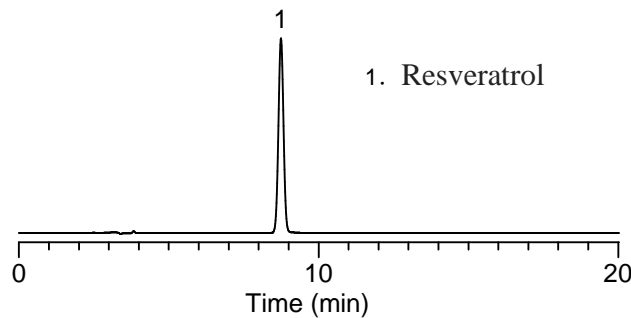
Mobile Ph : Water: Acetonitrile =70:30

Flow Rate : 1.0 mL/min

Temp : 35 °C

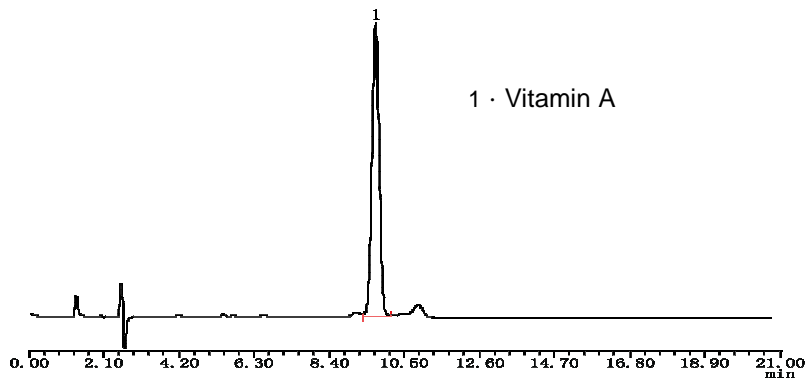
Detector : UV 303 nm

Sampling : 10 μL



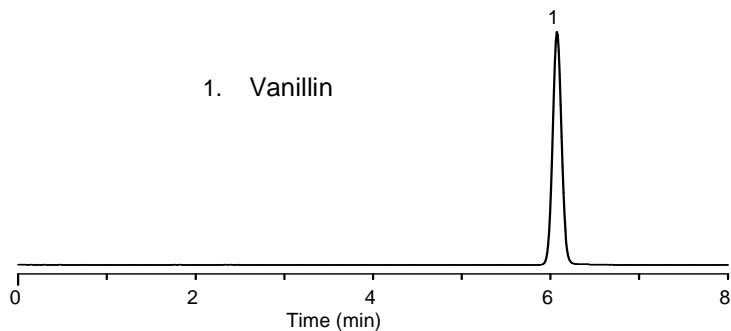
### Vitamin A

Column : Silversil C18 250 × 4.6 mm, 5 μm (Cat.No 99202)  
Mobile Ph : Methanol: Water =95:5  
Flow Rate : 1.0 mL/min  
Temp : Room Temp  
Detector : UV 326 nm  
Sampling : 20 μL



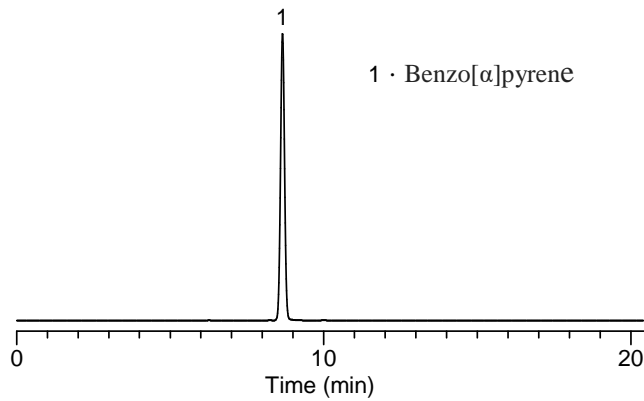
### Vanillin

Column : Silversil C18 250 × 4.6 mm, 5 μm (Cat.No 99202)  
Mobile Ph : Acetonitrile: 0.02mol/L Sodium Dihydrogen Phosphate ( Adjust to pH 4.0 by acetic acid ) = 30 : 70  
Flow Rate : 1.0 mL/min  
Temp : 30 °C  
Detector : UV 276 nm  
Sampling : 20 μL



## Benzo[ $\alpha$ ]pyrene

Column : Silversil C18 250 x 4.6 mm, 5  $\mu$ m (**Cat.No 99202**)  
Mobile Ph : Acetonitrile: Water= 97:3  
Flow Rate : 1.0 mL/min  
Temp : 30  $^{\circ}$ C  
Detector : UV 254 nm  
Sampling : 10  $\mu$ L



## Pentachlorophenol

Column : Silversil C18 250 x 4.6 mm, 5  $\mu$ m (**Cat.No 99202**)  
Mobile Ph : Methanol: 1% Acetic acid = 90:10  
Flow Rate : 1.0 mL/min  
Temp : 30  $^{\circ}$ C  
Detector : UV 225 nm  
Sampling : 10  $\mu$ L

