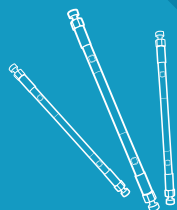# Blossmate™ PSV C18 HPLC Column

——Compatible With High Proportion of Aqueous Phase

welch

Blossmate™ PSV C18 is a newly developed HPLC column which can be compatible with high proportion of aqueous phase. Taking super high purity spherical silica as matrix, it bonded high-density alkyl functional groups.

Blossmate™ PSV C18 packing materials have high selectivity and strong retention ability for hydrophilic and polar compounds which are often difficult to be retained and separated in normal C18 columns.

Blossmate™ PSV C18 is fully end-capped, which greatly enhances the packing materials' stability. Even under neutral pH condition, it keeps stable baseline and high sensitivity , making it particularly suitable for high efficiency separation columns with technologies such as LC-MS.

Blossmate™ PSV C18 column is widely used in the separation and analysis of oligosaccharides, amino acids, small peptides, nucleotides, organic acids and other active components.

Bonded phase	Octadecyl group
Particle size	5 μm
Pore size	120 Å
Surface area	300 m²/g
Carbon loading	12%
End-capped	Yes
pH range	2-8
USP	L1

Features of Blossmate™ PSV C18:

Detection of preservatives in food is a project with high requirement of resistance of column. Using high proportion of ammonium as mobile phase tests the stability of column. For adding additives such as benzoic acid, sorbic acid, saccharin sodium will easily produce pollution to column while dehydroacetic acid is prone to have tailing problem, this project is known as a difficult project in food detection industry. But now, Welch Blossmate™ PSV C18 column will solve all the above problems for you. With stronger retention effect, peak shape, perfect efficiency, even injected for more than 1000 times continuously, it still can maintain good peak shape.

Have strong separation and retention ability, better peak shape, higher column efficiency

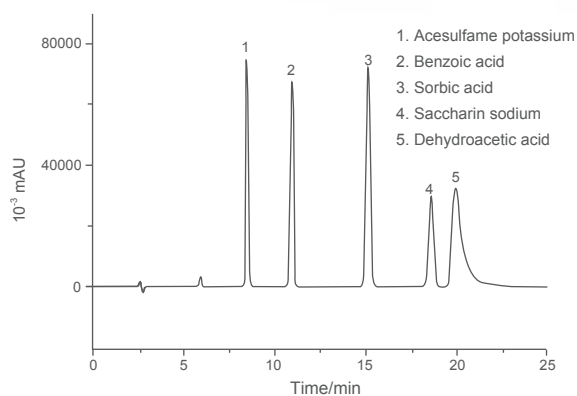Chromatogram of analyzing five food additives by Blossmate™ PSV C18

1. Acesulfame potassium
2. Benzoic acid
3. Sorbic acid
4. Saccharin sodium
5. Dehydroacetic acid
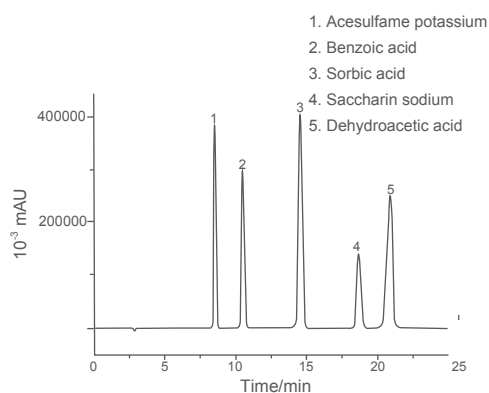
Column: Blossmate™ PSV C18 4.6×250 mm, 5 μm

Mobile phase: 20 mM ammonium acetate solution:

methanol=93: 7(on-line blending)

Column temperature: 30℃

Flow rate: 1.0 mL/min

Wavelength: 230 nm

Injection volume: 5 μL

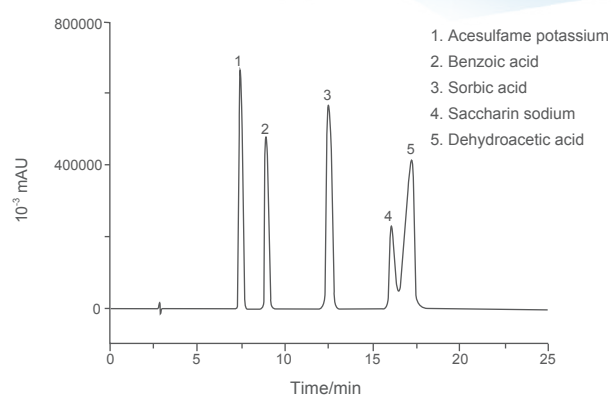Concentration of sample: concentration of five kinds of preservatives and sweeteners is 200 μg/mL

Note: For the determination of the five food additives with Blossmate™ PSV C18 column, the proportion of aqueous phase in the mobile phase shall not be less than 7% in order to ensure the separation and longevity of the column.

Blossmate™ PSV C18 HPLC Column

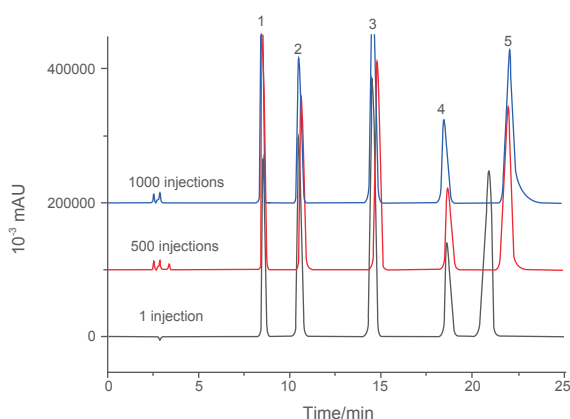## Chromatogram of food additives from different manufacturers

1. Acesulfame potassium
2. Benzoic acid
3. Sorbic acid
4. Saccharin sodium
5. Dehydroacetic acid

Manufacturer A

1. Acesulfame potassium
2. Benzoic acid
3. Sorbic acid
4. Saccharin sodium
5. Dehydroacetic acid

Manufacturer B

High stability, longer lifetime

1000 injections

500 injections

1 injection

Experiment on the lifetime of Blossmate™ PSV C18 with spiked sample (sample matrix: biscuit)

From the above results, it is obvious that the five preservatives and sweeteners still have ideal peak shape and excellent separation effect under high concentration (200 g/mL) in continuous spike experiments.

Excellent lot-to-lot stability

The third batch

The second batch

The first batch
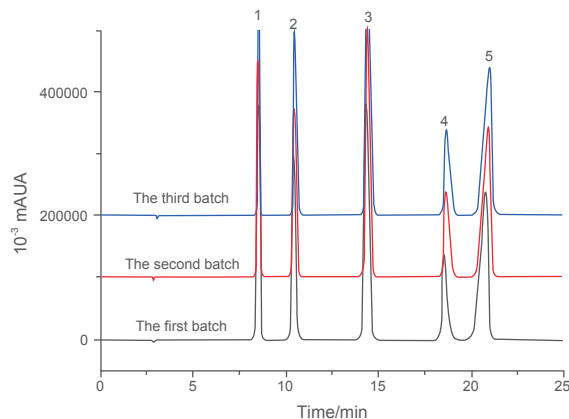
Blossmate™ PSV C18 keeps the stable reproducibility of Blossmate™ series.

The above three lots of Blossmate™ PSV C18 column test results show that it has good lot-to-lot stability.

Ordering information

P/N	Particle size	Specification
00605-21043	5 µm	4.6×250 mm
00605-21041	5 µm	4.6×150 mm