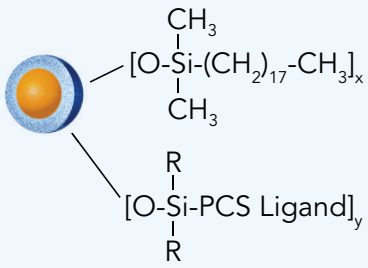
HALO® PCS C18 - 2µm Particle Size

POSITIVELY EXCEPTIONAL RESULTS FOR BASIC COMPOUNDS

Built upon proven Fused-Core® technology for speed and efficiency, the HALO® PCS column products are positively charged surface chemistries designed to deliver improved peak shapes for basic compounds.

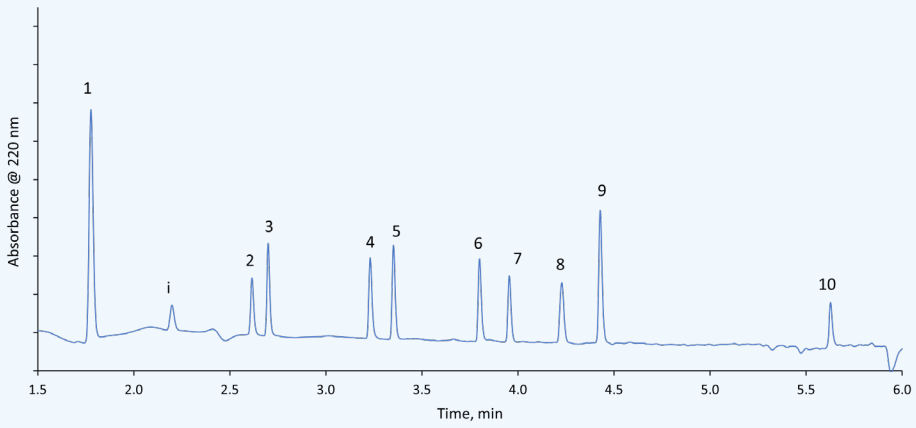


Ideal for use with low ionic strength mobile phases, HALO® PCS maintains peak symmetry at higher loading capacities . Now available in **2** and **2.7µm**. These columns are optimized to deliver performance for reproducible, high efficiency LC and LCMS separations.

- Excellent peak shape and increased loading capacity for basic compounds such as Beta Blockers or Drugs of Abuse
- UHPLC and LCMS compatible
- Alternate L1 selectivity (PCS C18)

RAPID SEPARATION WITH EXCELLENT RESOLUTION

Using a 2 µm HALO® PCS C18 column with UV detection and an MS-compatible mobile phase, ten different beta blockers are cleanly separated in under 6 minutes. The 150 mm column delivers sharp resolution and rapid elution of all peaks, ensuring efficient analysis in a short run time.



PEAK IDENTITIES:

1. Atenolol
2. Pindolol
3. Nadolol
4. Metoprolol
5. Acebutolol
6. Oxprenolol
7. Bisoprolol
8. Labetalol
9. Propranolol
10. Carvedilol

i = impurity in bisoprolol

TEST CONDITIONS:

Column: HALO 90 Å PCS C18, 2.0 µm, 2.1 x 150 mm
Mobile Phase A: Water, 0.1% Formic Acid
Mobile Phase B: Acetonitrile, 0.1% Formic Acid
Gradient Separation:

Time:	%B
0.00	3
5.00	36
6.50	100
7.50	100
8.00	3
12.0	3

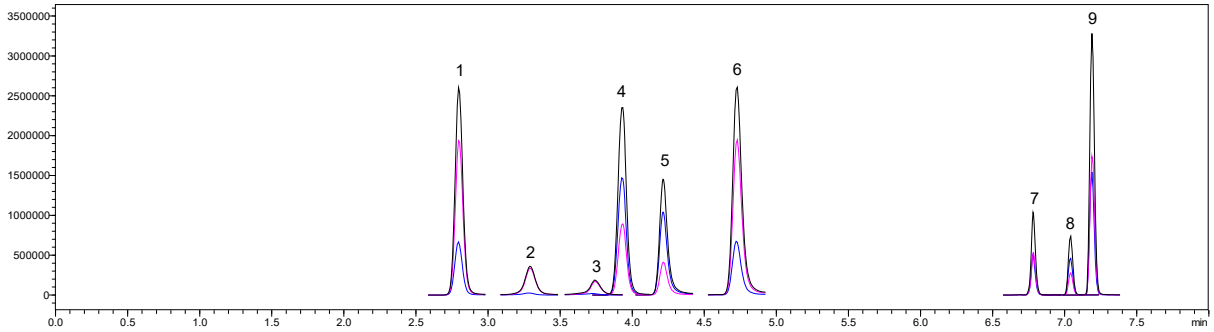
Flow Rate: 0.4 mL/min.
Back Pressure: 599 bar
Temperature: 30 °C
Injection: 2.0 µL
Sample Solvent: 93/7 Water/ACN
Wavelength: PDA, 220 nm
Flow Cell: 1 µL
Data Rate: 40 Hz
Response Time: 0.1 sec.
LC System: Shimadzu Nexera

HALO®

PERFORMANCE FOR BASIC COMPOUNDS

LC-MS ANALYSIS OF ANTIBIOTICS ON 2 µm HALO® PCS C18

A mixture of 9 antibiotics from 5 different classes is separated using a 2 µm HALO 90 Å PCS C18 column. The PCS C18 phase was selected since it gives improved peak shape for basic compounds over traditional phases when run using low ionic strength mobile phase conditions, such as formic acid. One explanation for the improved peak shape at higher loading is that on the PCS phase, the limited density of the fixed surface positive charge, and its anionic partner, reduces the surface overload effect on the analytes.



PEAK IDENTITIES

1. Sulfamerazine
2. Tetracycline
3. Oxytetracycline
4. Sulfamethazine
5. Ciprofloxacin
6. Enrofloxacin
7. Erythromycin
8. Penicillin G
9. Oxacillin

TEST CONDITIONS

Column: HALO 90 Å PCS C18, 2 µm, 2.1 x 50 mm
Part Number: 91882-417
Mobile Phase A: Water/0.1% Formic Acid
Mobile Phase B: Methanol/0.1% Formic Acid
Gradient:

Time	%B
0.00	6
5.50	19
6.00	64
8.00	95
8.01	6
12.00	6

Flow Rate: 0.4 mL/min.
Pressure: 300 bar
Temperature: 27 °C
Injection Volume: 0.5 µL
Sample: 0.2 - 17 µg/mL
Sample Solvent: 98/2 water/methanol
LC System: Shimadzu Nexera X2

MS CONDITIONS

System: Shimadzu 8060
Detection Mode: DUIS ESI + 1 kV
Nebulizer Gas Flow: 3 L/min.
Interface Temperature: 150 °C
DL Temperature: 300 °C
Heat Block Temperature: 200 °C
Drying Gas Flow: 5 L/min.

PRODUCT CHARACTERISTICS

Ligand: dimethyloctadecylsilane
Particle Size (µm): 2
Pore Size (Å): 90
USP Designation: L1
Carbon Load (%): 7.4

Surface Area (m^2/g): 125
Endcapped (Y/N): Yes
High pH Limit/Max Temp: 7/40 °C
100% Aqueous Compatible: Yes

PCS 2µm Part Numbers

Dimensions: ID x Length	90 Å PCS C18 (2 µm)	Dimensions: ID x Length	90 Å PCS C18 (2 µm)	Dimensions: ID x Length	90 Å PCS C18 (2 µm)
1.5 x 50	9188X-417	2.1 x 20	91882-217	3.0 x 30	91883-317
1.5 x 100	9188X-617	2.1 x 30	91882-317	3.0 x 50	91883-417
1.5 x 150	9188X-717	2.1 x 50	91882-417	3.0 x 100	91883-617
		2.1 x 100	91882-617	3.0 x 150	91883-717
		2.1 x 150	91882-717	3.0 x 250	91883-917
		2.1 x 250	91882-917		
HALO GUARD COLUMN 3 PACK		2.1 x 5	91882-117	3.0 x 5	91883-117

HALO®

manufactured by: advancedmaterialstechnology