



100% Aqueous Compatible

HALO



INTRODUCING HALO® 90Å AQ-C18

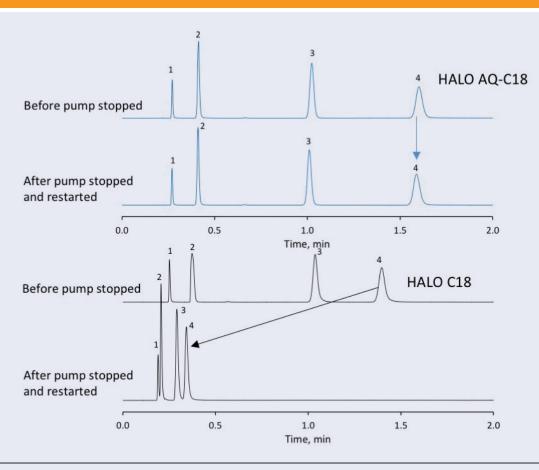
Introducing the new HALO° AQ-C18, a new bonded phase that is available on the Fused-Core° 2.7 μ m superficially porous particle design with a 0.5 μ m shell and 90Å pores. The AQ-C18 is a C18 bonded phase prepared using a proprietary procedure that increases phase polarity, making the AQ-C18 an excellent alternative C18 to consider, especially in aqueous mobile phases. HALO AQ-C18 is very complimentary to classic HALO C18 and extends C18 usefulness to 100% aqueous mobile phases.

Advantages of the New AQ-C18:

- Resistant to dewetting and compatible with 100% aqueous mobile phases
- Different selectivity than HALO C18, offering another option to resolve difficult peak pairs
- Retains polar molecules more than classic C18 phases under most mobile phase conditions

RESISTANCE TO DEWETTING

Figure 1. The unique polar modified bonded phase of HALO AQ-C18 enables it to be run in 100% aqueous mobile phase without experiencing loss in retention due to dewetting when pressure is relieved. The retention is nearly 100% maintained compared to the HALO C18 after the pump is stopped and restarted.



TEST CONDITIONS:

Column: 4.6 x 50 mm **Top:** HALO 90Å AQ-C18, 2.7 µm

Bottom: HALO 90Å C18, 2.7 μm **Part Numbers:**

Top: 92814-422 **Bottom:** 92814-402

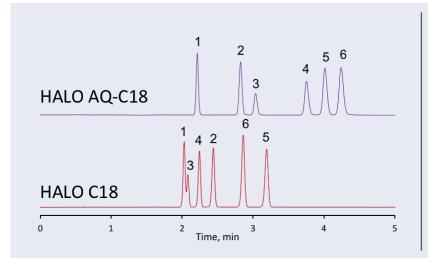
Mobile Phase: 100% 20 mM Potassium Phosphate buffer, pH 7

Flow Rate: 2 mL/min Temperature: 30 °C Detection: 254 nm Injection: 0.5 µL

Sample: (1) thiourea, (2) 5-fluorocytosine, (3) adenine and (4) thymine

INCREASED RETENTION FOR POLAR COMPOUNDS — DIFFERENT SELECTIVITY

Figure 2. The HALO AQ-C18 column exhibits increased retention of polar compounds along with a different elution order relative to the HALO C18.



TEST CONDITIONS:

Column: 4.6 x 100 mm

Top: HALO 90Å AQ-C18, 2.7 μm **Bottom:** HALO 90Å C18, 2.7 μm

Part Numbers:

Top: 92814-622
Bottom: 92814-602
Mobile Phase A: Water
Mobile Phase B: Methanol
Isocratic: 50/50 A/B
Flow Rate: 1.3 mL/min
Temperature: 35 °C

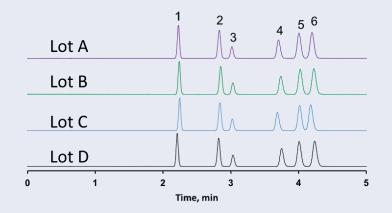
Sample: (1) cinnamyl alcohol, (2) 4-bromoacetanilide, (3) nitrobenzene, (4) 3,4-dinitrotoluene, (5) anisole and

(6) 2,4-dinitrotoluene

Detection: 254 nm Injection: 0.5 µL

LOT-TO-LOT REPRODUCIBILITY

Figure 3. The manufacturing process of HALO 90Å AQ-C18 is highly controlled, which results in a reproducible product as demonstrated by the lot-to-lot comparisons in Figure 3. The percent RSDs for the retention factors are all below 1.5% while the alpha values of adjacent peaks have percent RSDs lower than 1%.



TEST CONDITIONS:

Column: 4.6 x 100 mm

HALO 90Å AQ-C18, 2.7 μm

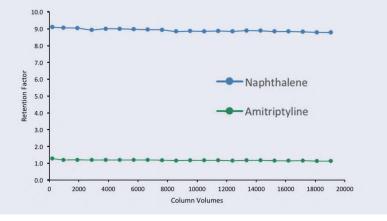
Part Number: 92814-622
Mobile Phase A: Water
Mobile Phase B: Methanol
Isocratic: 50/50 A/B
Flow Rate: 1.3 mL/min
Temperature: 35 °C
Detection: 254 nm
Injection: 0.5 µL

Sample: (1) cinnamyl alcohol, (2) 4-bromoacetanilide, (3) nitrobenzene, (4) 3,4-dinitrotoluene, (5) anisole and

(6) 2,4-dinitrotoluene

HIGH STABILITY AT LOW PH

Figure 4. Stability of the HALO 90Å AQ-C18 columns is demonstrated using pH 2 mobile phase conditions. The retention is maintained after 19,000 column volumes.



TEST CONDITIONS:

Column: 2.1 x 50 mm

HALO 90Å AQ-C18, 2.7 μm

Part Number: 92812-422

Mobile Phase A: 50 mM KCI/HCl, pH 2

Mobile Phase B: Acetonitrile Isocratic: 60/40 A/B Flow Rate: 1.0 mL/min

Flow Rate: 1.0 mL/n Pressure: 235 bar Temperature: 60 °C Detection: 254 nm Injection: 0.5 uL

Sample: (1) amitriptyline and (2) naphthalene

ACT NOW

Contact your local distributor to be among the first to experience these new HALO® columns!

www.advanced-materials-tech.com/find-a-distributor/



HALO AQ-C18

| Dimension - ID x length (mm) | Part No. | Dimension - ID x length (mm) | Part No. |
|---------------------------------|-----------|---------------------------------|-----------|
| 2.1 x 20 | 92812-222 | 3.0 x 100 | 92813-622 |
| 2.1 x 30 | 92812-322 | 3.0 x 150 | 92813-722 |
| 2.1 x 50 | 92812-422 | 3.0 x 250 | 92813-922 |
| 2.1 x 75 | 92812-522 | 4.6 x 20 | 92814-222 |
| 2.1 x 100 | 92812-622 | 4.6 x 30 | 92814-322 |
| 2.1 x 150 | 92812-722 | 4.6 x 50 | 92814-422 |
| 2.1 x 250 | 92812-922 | 4.6 x 75 | 92814-522 |
| 3.0 x 20 | 92813-222 | 4.6 x 100 | 92814-622 |
| 3.0 x 30 | 92813-322 | 4.6 x 150 | 92814-722 |
| 3.0 x 50 | 92813-422 | 4.6 x 250 | 92814-922 |
| 3.0 x 75 | 92813-522 | | |

HALO AQ-C18 Guard Columns, 3/Pack

| Dimension - ID x length (mm) | Part No. | |
|---------------------------------|-----------|--|
| 2.1 x 5 | 92812-122 | |
| 3.0 x 5 | 92813-122 | |
| 4.6 x 5 | 92814-122 | |
| | | |
| | | |
| | | |
| | | |
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| | | |
| Guard Column Holder (1) | 94900-001 | |



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