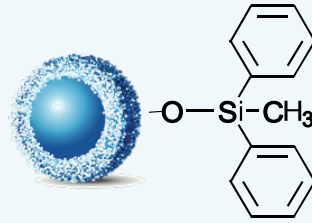


# HALO<sup>®</sup> 1000 Å DIPHENYL

## INNOVATION YOU CAN TRUST!

In alignment with Advanced Materials Technology's ongoing innovation of wide pore materials for bioanalysis, we are excited to introduce another 1000 Å phase to our repertoire.

*Your protein separation challenges are unique so why should your column choices be limited?*

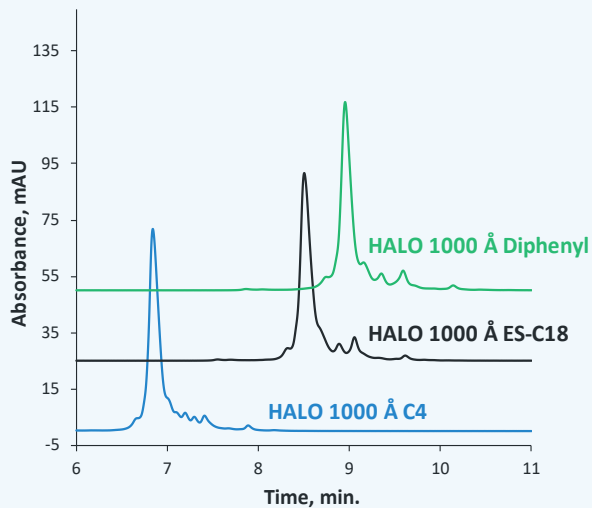


## ADVANTAGES OF THE NEW HALO DIPHENYL

- Extremely stable bonded phase using proven Fused-Core<sup>®</sup> technology
- Alternate selectivity for large biomolecules
- High resolution

### High Temperature Comparison of HALO 1000 Å Phases

**Figure 1.** Three bonded phases (C4, ES-C18, and Diphenyl) are now available on HALO 1000 Å superficially porous particles. Each phase offers unique selectivity for mAbs as demonstrated by this high temperature separation of trastuzumab.



#### TEST CONDITIONS

**Column:**  
HALO 1000 Å C4, 2.7 µm, 2.1 x 150 mm HALO  
1000 Å ES-C18, 2.7 µm, 2.1 x 150 mm HALO  
1000 Å Diphenyl, 2.7 µm, 2.1 x 150 mm

**Flow Rate:** 0.4 mL/min

**Temperature:** 80 °C

**Injection Volume:** 2 µL of 2 mg/mL  
trastuzumab in water/0.1% TFA

**Instrument:** Shimadzu Nexera

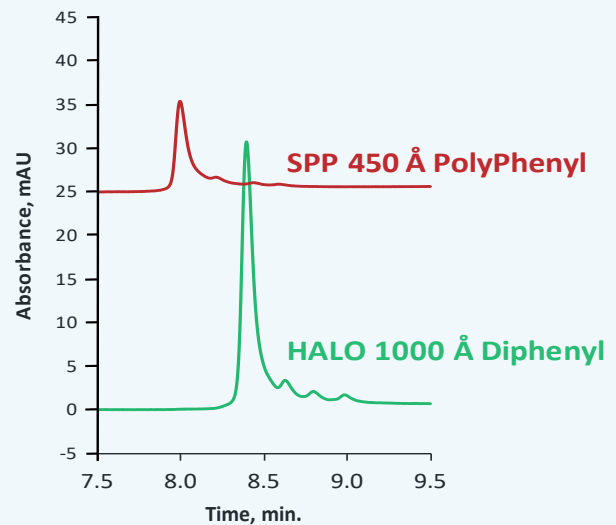
**Detection:** PDA at 280 nm

**Mobile Phase A:** water/0.1% TFA  
**Mobile Phase B:** ACN/0.1% TFA

**Gradient:**  
32-40% B in 16 min (C4 and ES-C18)  
32-38% B in 12 min (Diphenyl)

### Comparison of HALO 1000 Å Diphenyl to Competitor PolyPhenyl at 40 °C

**Figure 2.** HALO 1000 Å Diphenyl shows improved resolution, retention, and peak area compared to a competitor column of 450 Å SPPs with PolyPhenyl phase. The increased retention clearly demonstrates the benefit of unrestricted large pore access to the bonded phase. The HALO Diphenyl phase can also be operated at 40 °C without showing peak area loss.



#### TEST CONDITIONS

**Column:**  
HALO 1000 Å Diphenyl, 2.7 µm, 2.1 x 150 mm  
SPP 450 Å PolyPhenyl, 2.7 µm, 2.1 x 150 mm

**Flow Rate:** 0.4 mL/min

**Temperature:** 40 °C

**Injection Volume:** 2 µL of 2 mg/mL  
trastuzumab in water/0.1% TFA

**Instrument:** Shimadzu Nexera

**Detection:** PDA at 280 nm

**Mobile Phase A:** water/0.1% TFA  
**Mobile Phase B:** ACN/0.1% TFA

**Gradient:**  
30-45% B in 15 min



# HALO®

## PART NUMBERS

### ANALYTICAL COLUMNS

1000 Å, 2.7 µm

Dimensions: ID x Length (in mm)	Diphenyl
2.1 x 20	92712-226
2.1 x 30	92712-326
2.1 x 50	92712-426
2.1 x 75	92712-526
2.1 x 100	92712-626
2.1 x 150	92712-726
2.1 x 250	92712-926
3.0 x 20	92713-226
3.0 x 30	92713-326
3.0 x 50	92713-426
3.0 x 75	92713-526
3.0 x 100	92713-626
3.0 x 150	92713-726
3.0 x 250	92713-926
4.6 x 20	92714-226
4.6 x 30	92714-326
4.6 x 50	92714-426
4.6 x 75	92714-526
4.6 x 100	92714-626
4.6 x 150	92714-726
4.6 x 250	92714-926
10.0 x 50	92710-426
10.0 x 75	92710-526
10.0 x 100	92710-626
10.0 x 150	92710-726

### CAPILLARY COLUMNS

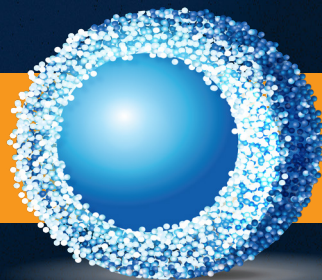
1000 Å, 2.7 µm

Dimensions: ID x Length (in mm)	Diphenyl
0.075 x 50	97219-426
0.075 x 100	97219-626
0.075 x 150	97219-726
0.1 x 50	97218-426
0.1 x 100	97218-626
0.1 x 150	97218-726
0.2 x 50	97217-426
0.2 x 100	97217-626
0.2 x 150	97217-726
0.3 x 50	97216-426
0.3 x 100	97216-626
0.3 x 150	97216-726
0.5 x 50	97215-426
0.5 x 100	97215-626
0.5 x 150	97215-726

### GUARD COLUMNS

2.7 µm, 1000 Å Guard columns, 3-pack

Dimensions: ID x Length (in mm)	Diphenyl
2.1 x 5	92712-126
3.0 x 5	92713-126
4.6 x 5	92714-126
Guard Column Holder	92814-111



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