



**Zebtron™ ZB-1XT SimDist  
Metal GC Column**

Easily find ASTM and Fuel applications at:  
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# Zebbron

GC Columns

TM

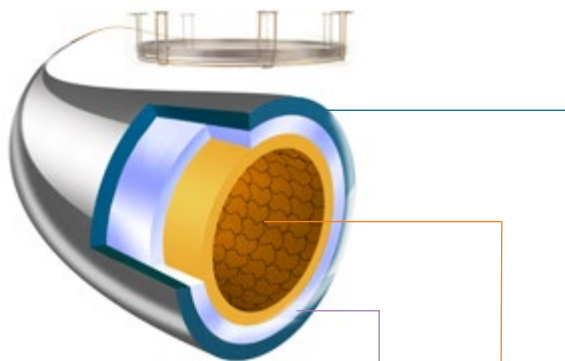
- Less Adsorption
  - Better Peak Shape
  - Higher Efficiencies
- for your Simulated Distillation GC Method

 **phenomenex**<sup>®</sup>  
...breaking with tradition<sup>SM</sup>



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# Sharper Peak Shape and Better Efficiency through Uniform Glass Infusion™ Coating Technology



**Multi-layer Glass Infusion** ensures a thick uniform surface coverage.

**Advanced High Temperature Polymer** with Engineered Self Cross-linking (ESC™) provides intact stationary phase.

**Rugged Metal Tubing** allows you to run methods up to 450 °C without becoming brittle.

## Performance Benefits

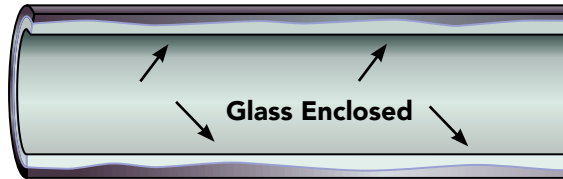
- 1. Sharper Peaks and Higher Efficiency:**  
Glass Infusion Technology Provides Uniform Coating and Minimizes Unwanted Activity.
- 2. Consistency and Reliability:**  
Zebtron Columns are INDIVIDUALLY Tested for Better Reproducibility and Overall Performance.
- 3. Higher Efficiency:**  
Up to 70 % Higher Column Efficiency.
- 4. Long Lifetime and Better Results:**  
Improved Resolution of C50/C52 Hour after Hour.
- 5. Guaranteed:**  
100 % Risk-Free.

# Improved Recovery and Peak Shape

## The Benefits of Glass Infusion™ Technology

The Zebtron ZB-1XT SimDist metal columns employ a new proprietary bonding called Glass Infusion Technology. The Glass Infusion technology starts by depositing a very uniform layer of glass that completely covers the internal metal surfaces of the column. The result is a uniform coating throughout the column.

**Glass Infused ZB-1XT™**



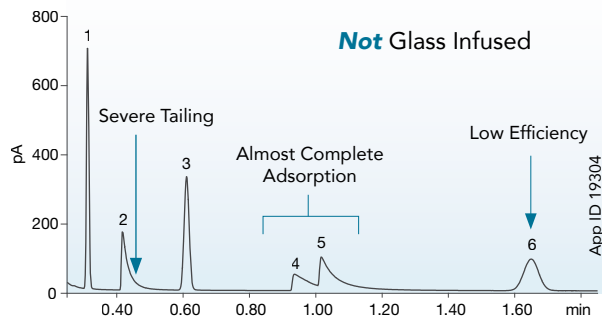
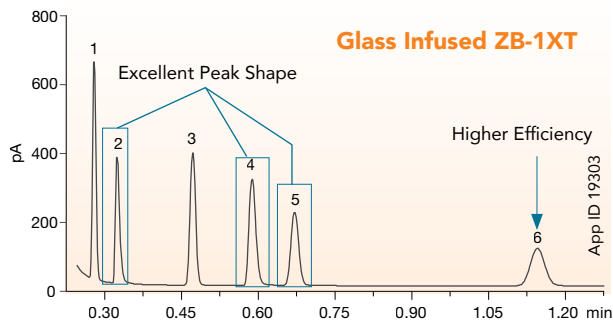
**Not Glass Infused**



- Uniform Glass Infusion ensures adequate covering of exposed metal to promote better recovery and peak shape.
- Each Zebtron ZB-1XT is individually tested to confirm and ensure excellent reproducibility.
- The uniform glass coating provides a consistent foundation for stationary phase bonding, thus promoting better overall efficiency and resolution.
- Non-glass infused with exposed metal can cause tailing peaks and sample adsorption.
- Some manufacturers batch test their columns, leading to poor column-to-column reproducibility.
- These exposed surfaces result in abnormal bonding of the stationary phase which affects chromatographic performance, decreases efficiencies, and inconsistent performance between columns.

# Upgrade from Tailing Peaks and Sample Adsorption

## Zebron™ ZB-1XT SimDist (Glass Infused) vs. Brand X (Not Glass Infused)



GC Conditions for both columns:

**Injection:** Split 100:1 @ 250 °C, 1.0 µL

**Carrier Gas:** Hydrogen @ 1.93 mL/min (constant pressure)

**Oven Program:** 130 °C (Isothermal)

**Detector:** FID @ 325 °C

**Sample:**

1. Undecane
2. 4-Chlorophenol
3. Tridecane
4. 1-Undecanol
5. Dicyclohexylamine
6. Pentadecane

*Note: Sample at 250 µg/mL each in hexane*

# Easily Realize Resolution Gains on ASTM Methods

## Zebron™ ZB-1XT SimDist Featured Applications

### Check out your ZB-1XT benefits!

#### For Your Lab

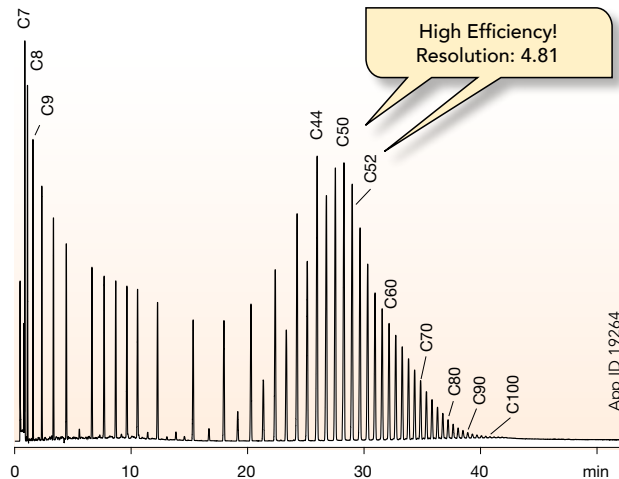
- Consistent Performance
- Improved Efficiencies
- Extended Lifetimes
- Reduced Carryover
- Minimum Maintenance

#### For your Refining Process

- Better Process Planning
- Better Fractionating
- Increased Product Yields

Need more Help? Get it all at:  
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### Hydrocarbons C7-C100+ (ASTM D7169)



**Column:** Zebron ZB-1XT SimDist  
**Dimensions:** 5 meter x 0.53 mm x 0.15  $\mu$ m  
**Part No.:** 7AK-G026-05  
**Injection:** On-Column @ 33 °C, 1  $\mu$ L  
**Carrier Gas:** Helium @ 7 mL/min (constant flow)

**Oven Program:** 30 °C to 450 °C @ 10 °C/min for 10 min  
**Detector:** FID @ 450 °C  
**Sample:** C7 to C44 hydrocarbons and POLYWAX® 655 in CS<sub>2</sub>

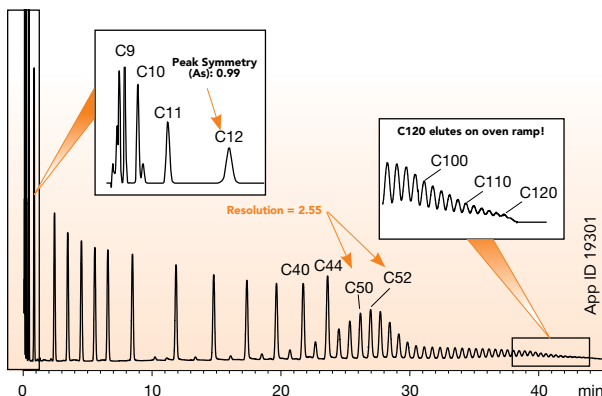
*Note: Chromatogram is baseline subtracted.*

# Better Results for High Temperature SimDist Analysis (ASTM D7169)

## Zebtron™ ZB-1XT SimDist Featured Applications

Why just settle with C90 or C100 when you can extend the performance to higher hydrocarbons and optimize productivity. The combined ruggedness of the metal hardware and high temperature polymer used in each Zebtron ZB-1XT SimDist column allows for extended analysis up to C120. With an extended analysis range, higher boiling point compounds will elute off the column instead of deteriorating column and system lifetime by remaining as residues.

**Glass Infusion™** Technology provides improved efficiency, allowing sharper peaks and improved signal-to-noise for late eluting and low level components.



App ID 19301

- Column:** Zebtron ZB-1XT SimDist
  - Dimensions:** 5 meter x 0.53 mm x 0.09  $\mu$ m
  - Part No.:** 7AK-G026-55
  - Injection:** On-Column @ 53 °C, 1  $\mu$ L
  - Carrier Gas:** Helium @ 34 mL/min (constant flow)
  - Oven Program:** 35 °C to 430 °C @ 9 °C/min for 10 min
  - Detector:** FID @ 450 °C
  - Sample:** D2887 calibration mix with POLYWAX® 1000 in CS<sub>2</sub>
- Note: Chromatogram has been baseline subtracted.*

# Upgrade to Zebron™

## Upgrade to Zebron from any 100% dimethylpolysiloxane phase:

### Agilent®

- DB-HT SimDist
- CP-SimDist
- CP-SimDist UltiMetal
- DB-PS1
- DB-PS2887
- DB®-1

### Restek®

- MXT®-1HT  
SimDist
- Rtx®-1
- Rxi®-1HT

### SGE®

- BPX1-SimD
- BP1

## Zebron ZB-1XT SimDist Metal GC Columns

ID (mm)	df (µm)	Temp. Limits °C	Part No.
<b>5-Meter Column</b>			
0.53	0.09	-60 to 450	7AK-G026-55
0.53	0.15	-60 to 450	7AK-G026-05
<b>5-Meter Column with 2-Meter Guardian™ Integrated Guard</b>			
0.53	0.09	-60 to 450	7AK-G026-55-GGT
0.23	0.15	-60 to 450	7AK-G026-05-GGT
<b>10-Meter Column</b>			
0.53	0.15	-60 to 450	7CK-G026-05
0.53	0.88	-60 to 450	7CK-G026-49
0.53	2.65	-60 to 450	7CK-G026-35
<b>10-Meter Column with 5-Meter Guardian™ Integrated Guard</b>			
0.53	2.65	-60 to 450	7CK-G026-35-GGA
<b>15-Meter Column</b>			
0.53	0.25	-60 to 450	7EK-G026-11

If you need a 5 in. cage, simply add a (-B) after the part number, e.g., 7CK-G026-05-B.  
Some exceptions may apply. Agilent 6850 and some SRI and process GC systems use only 5 in. cages.

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## Recommended Applications

- ASTM Methods (D2887, D6352, D7169)
- Crude Oil
- Gasoline Fractions
- Petroleum Distillates
- Petroleum Fractions
- Simulated Distillation
- Vacuum Distillates

## Easy Seals™

Part No.	Description	Unit
<b>Standard, single groove for splitless applications, 0.8 mm dia. inlet hole</b>		
AG0-8619	Easy Seal Inlet Base Seal, Gold Plated, for Agilent GCs	2/pk
AG0-8620	Easy Seal Inlet Base Seal, Gold Plated, for Agilent GCs	10/pk

## Ceramic Scoring Wafers

Part No.	Description	Unit
AG0-4718	Ceramic Scoring Wafer	2/pk



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### Terms and Conditions

Offer valid only for addressee. Limit 5 one cent Zebron ZB-1XT columns. One cent column must be of equal or lesser value than the column purchased at regular price. Offer must be specified at time of order and cannot be combined with any other discount or promotional item. Subject to Phenomenex Standard Terms and Conditions which may be viewed at [www.phenomenex.com/TermsAndConditions](http://www.phenomenex.com/TermsAndConditions).

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