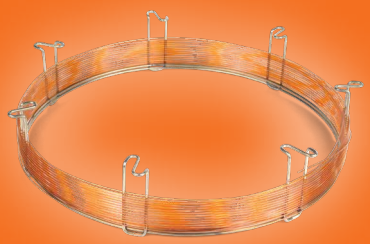
Zebron™
GC Columns

Introducing

ZB-DHA-PONA



- Designed and Tested for Detailed Hydrocarbon Analysis
- Excellent Response and Peak Symmetry for Polar Oxygenates
- Suitable for DHA, PONA, PIONA, PIANO, and ASTM Methods (D5134, D5441, D5501, D6729, D6730, D6733)

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. . . breaking with tradition℠

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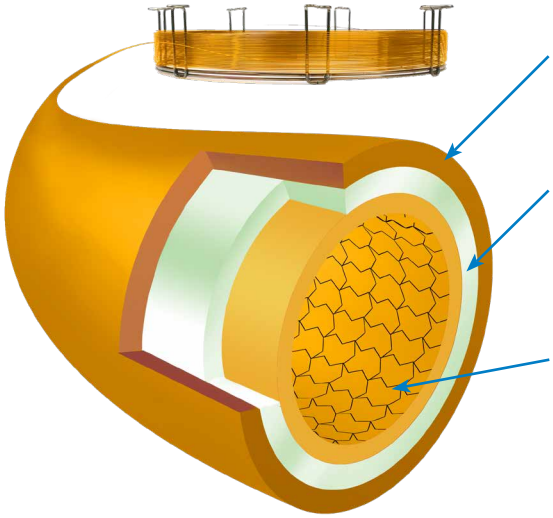
US

The Optimal Choice for PIONA, DHA and PONA

Say Hello to the Zebron™ ZB-DHA-PONA GC Column

Zebron ZB-DHA-PONA is the optimal choice for the analysis of Detailed Hydrocarbon Analysis (DHA) within the Fuel industry. It's unique Engineered Self Cross-linking™(ESC) stationary phase provides low bleed, exceptional column life, and optimal separation of DHA critical pairs with symmetric peaks. In addition, Zebron ZB-DHA-PONA GC columns provide excellent response and peak symmetry for polar oxygenates.



Flexible Polyimide

Provides temperature stability and flexibility.

Specially Deactivated Fused Silica Surface

Gives excellent peak shape for polar and nonpolar compounds.

Stationary Phase

Optimized 100% dimethylpolysiloxane phase, highly efficient dimension and consistent film thickness delivers excellent separation of Paraffins, Iso-paraffins, Olefins, Naphthenes, Aromatics and polar compounds. Extensive Engineered Self Cross-linking (ESC) provides lowest bleed.

Easy ZB-DHA-PONA Selection for Your ASTM Method

Method	Description	Recommended Column	Recommended Dimensions	Phenomenex Part Number
ASTM D5134	Standard Test Method for Detailed Analysis of Petroleum Naphtha's through n-Nonane by Capillary Gas Chromatography	ZB-DHA-PONA	50 m x 0.20 mm x 0.5 µm	7JE-G042-17
		ZB-DHA-PONA	100 m x 0.25 mm x 0.5 µm	7MG-G042-17
ASTM D5441	Standard Test Method for Analysis of Methyl Tert-Butyl Ether (MTBE) by GC	ZB-DHA-PONA	50 m x 0.20 mm x 0.5 µm	7JE-G042-17
		ZB-DHA-PONA	100 m x 0.25 mm x 0.5 µm	7MG-G042-17
		ZB-DHA-PONA	150 m x 0.25 mm x 1 µm	7QG-G042-22
ASTM D5501	Standard Test Method for Determination of Ethanol and Methanol Content in Fuels Containing Greater than 20 % Ethanol by Gas Chromatography	ZB-DHA-PONA	100 m x 0.25 mm x 0.5 µm	7MG-G042-17
		ZB-DHA-PONA	150 m x 0.25 mm x 1 µm	7QG-G042-22
ASTM D6729	Standard Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 100 Meter Capillary High Resolution Gas Chromatography	ZB-DHA-PONA	100 m x 0.25 mm x 0.5 µm	7MG-G042-17
ASTM D6730	Standard Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 100–Meter Capillary (with Pre-column) High-Resolution Gas Chromatography	ZB-DHA-PONA	50 m x 0.20 mm x 0.5 µm	7JE-G042-17
		ZB-DHA-PONA	100 m x 0.25 mm x 0.5 µm	7MG-G042-17
		ZB-DHA-PONA	150 m x 0.25 mm x 1 µm	7QG-G042-22
		ZB-DHA-PONA-TUNE	5 m x 0.25 mm x 1 µm	7AG-G042-22
ASTM D6733	Standard Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 50-Meter Capillary High Resolution Gas Chromatography	ZB-DHA-PONA	50 m x 0.20 mm x 0.5 µm	7JE-G042-17

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Discover the Zebron™ ZB-DHA-PONA

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PIONA Analysis

We developed this special Engineered Self Cross-linking™ (ESC) stationary phase with an optimized 100% dimethylpolysiloxane to allow for an ideal separation and resolution of all the components needed for PIONA and Detailed Hydrocarbon Analysis (DHA). The ESC technology found in each Zebron ZB-DHA-PONA also provides the additional benefit of low bleed and exceptional column life.

- Highly efficient dimension (100 meter length x 0.25 mm ID x 0.50 µm film thickness) provides ideal separation and resolution
- The smaller 0.25 mm diameter along with the column length provides an efficient mass transfer of the complex analytes for great separation and peak shapes
- 100% dimethylpolysiloxane provides true boiling point-based separation

The PIONA analysis below illustrates the successful separation of Paraffins, Isoparaffins, Olefins, Naphthenes, and Aromatics using one ZB-DHA-PONA GC column dimension and one single method.

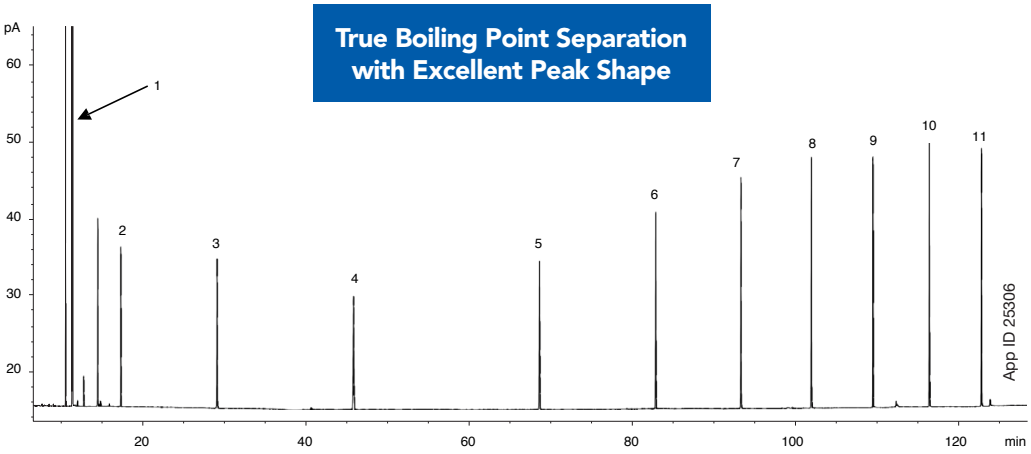
Conditions for all applications:

Column: Zebron™ ZB-DHA-PONA
Dimensions: 100 meter x 0.25 mm x 0.50 µm
Part No.: 7MG-G042-17
Injection: Split 40:1 @ 300 °C, 0.2 µL

Recommended Liner: Zebron PLUS Straight Z-Liner™
Part No.: AG2-0A03-05
Carrier Gas: Helium @ 1.55 mL/min (Constant Flow)
Oven Program: 35 °C for 14 min, to 60 °C @ 1.1 °C/min for 19 min, to 280 °C @ 2 °C/min for 5 min
Detector: FID @ 320 °C

Separation of Paraffins

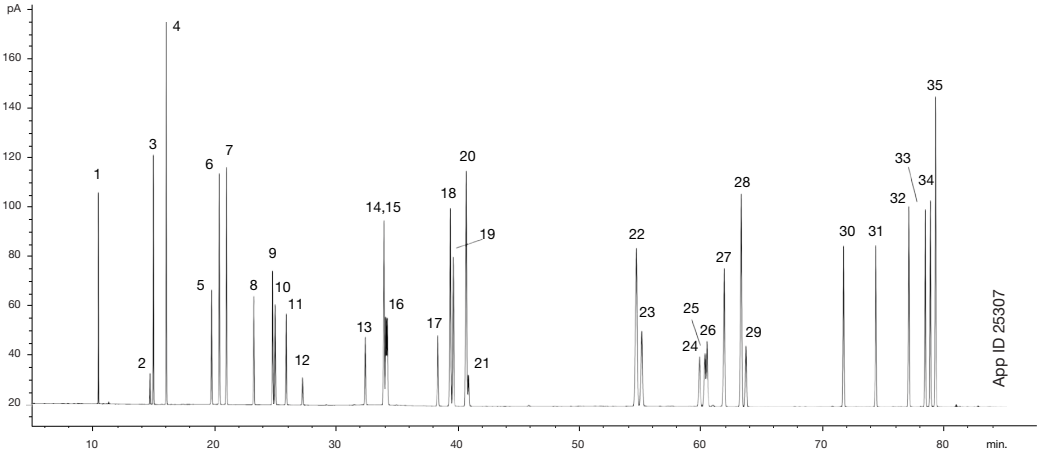
True Boiling Point Separation with Excellent Peak Shape



Sample:

1. Pentane
2. Hexane
3. Heptane
4. Octane
5. Nonane
6. Decane
7. Undecane
8. Dodecane
9. Tridecane
10. Tetradecane
11. Pentadecane

Separation of Isoparaffins



Sample:

1. Isopentane
2. 2,3-Dimethylbutane
3. 2-Methylpentane
4. 3-Methylpentane
5. 2,2-Dimethylpentane
6. 2,4-Dimethylpentane
7. 2,2,3-Trimethylbutane
8. 3,3-Dimethylpentane
9. 2-Methylhexane
10. 2,3-Dimethylpentane
11. 3-Methylhexane
12. 3-Ethylpentane
13. 2,2-Dimethyl hexane
14. 2,5-Dimethyl hexane
15. 2,2,3-Trimethylpentane
16. 2,4-Dimethylhexane
17. 2,3-Dimethylhexane
18. 2-Methylheptane
19. 4-Methylheptane
20. 3-Methylheptane
21. 3-Ethylhexane
22. 2,5-Dimethylheptane
23. 3,3-Dimethylheptane
24. 2,3-Dimethylheptane
25. 3,5-Dimethylheptane
26. 3,4-Dimethylheptane
27. 2-Methyloctane
28. 3,3-Diethylpentane
29. 3-Methyloctane
30. 2,2-Dimethyloctane
31. 3,3-Dimethyloctane
32. 2,3-Dimethyloctane
33. 3-Ethyloctane
34. 2-Methylnonane
35. 3-Methylnonane

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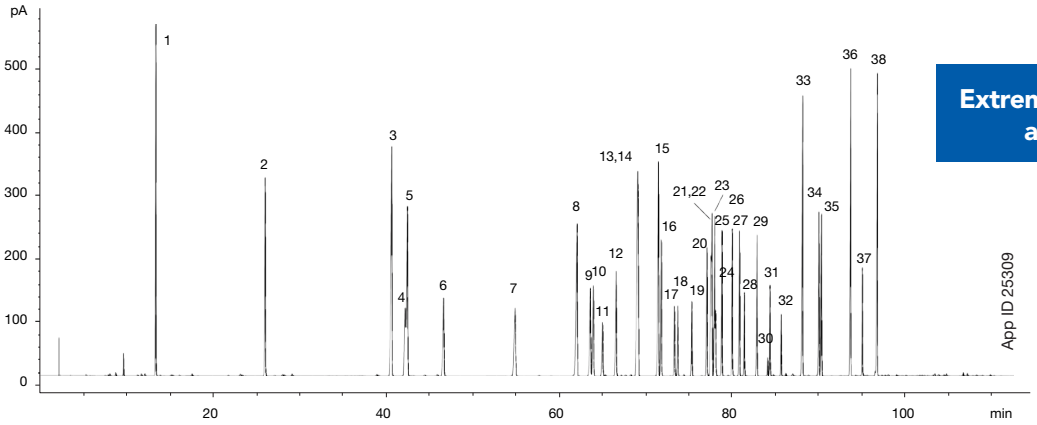
Separation of Aromatic Compounds

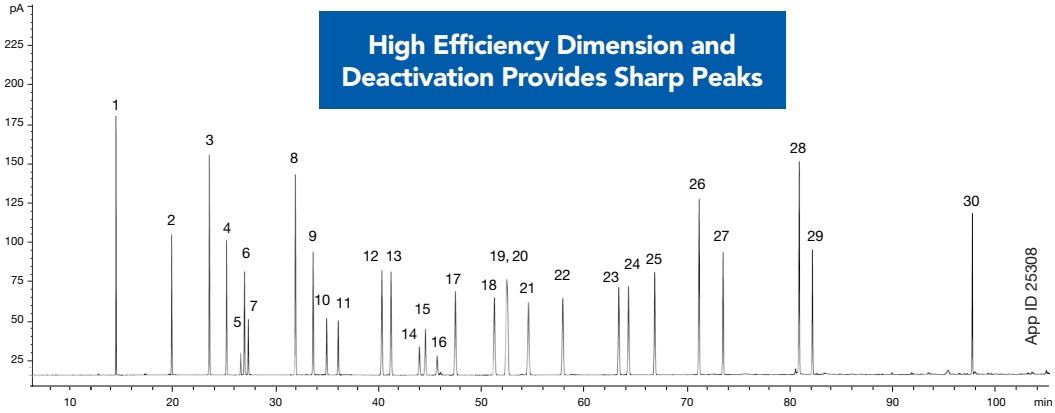


Extreme Low Bleed at 280°C

Sample:

1. Benzene
2. Toluene
3. EthylBenzene
4. m-Xylene
5. p-Xylene
6. o-Xylene
7. Isopropylbenzene
8. n-Propylbenzene
9. 1-Methyl-3-ethylbenzene
10. 1-Methyl-4-ethylbenzene
11. 1,3,5-Trimethylbenzene
12. 1-Methyl-2-ethylbenzene
13. 1,2,4-Trimethylbenzene
14. tert-Butylbenzene
15. Isobutylbenzene
16. sec-Butylbenzene
17. 1-Methyl-3-isopropylbenzene
18. 1-Methyl-4-isopropylbenzene
19. 1-Methyl-2-isopropylbenzene
20. 1-Methyl-3-n-propylbenzene
21. 1-Methyl-4-n-propylbenzene
22. n-Butylbenzene
23. 1-Methyl-2-n-propylbenzene
24. 1,2-Diethylbenzene
25. 1,4-Dimethyl-2-ethylbenzene
26. 1,3-Dimethyl-5-ethylbenzene
27. 1,2-Dimethyl-4-ethylbenzene
28. 1,3-Dimethyl-2-ethylbenzene
29. 1,2-Dimethyl-3-ethylbenzene
30. 1,2,4,5-Tetramethylbenzene
31. 2-Methylbutylbenzene
32. trans-1-Butyl-2-methylbenzene
33. n-Pentylbenzene
34. t-1-Butyl,3,5-dimethylbenzene
35. t-1-butyl-ethylbenzene
36. 1,3,5-Triethylbenzene
37. 1,2,4-Triethylbenzene
38. n-Hexylbenzene

Separation of Naphthenes

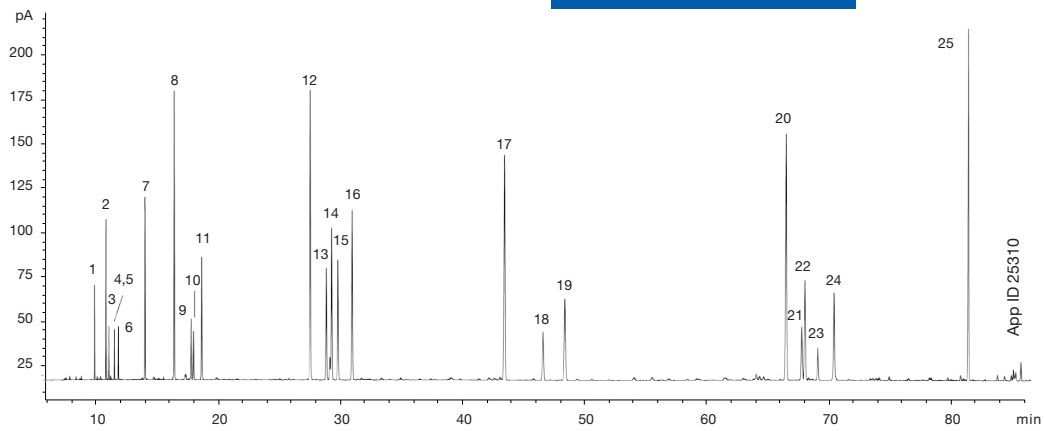


High Efficiency Dimension and Deactivation Provides Sharp Peaks

Sample:

1. Cyclopentane
2. Methylcyclopentane
3. Cyclohexane
4. 1,1-Dimethylcyclopentane
5. cis-1,3-Dimethylcyclopentane
6. trans-1,3-Dimethylcyclopentane
7. trans-1,2-Dimethylcyclopentane
8. Methylcyclohexane
9. Ethylcyclopentane
10. ctc-1,2,4-Trimethylcyclopentane
11. ctc-1,2,3-Trimethylcyclopentane
12. cct-1,2,4-Trimethylcyclopentane
13. trans-1,4-Dimethylcyclohexane
14. 1-Ethyl-1-methylcyclopentane
15. trans-1,2-Dimethylcyclohexane
16. ccc-1,2,3-Trimethylcyclopentane
17. Isopropylcyclopentane
18. cis-1,2-Dimethylcyclohexane
19. n-Propylcyclopentane
20. ccc-1,3,5-Trimethylcyclohexane
21. 1,1,4-Trimethylcyclohexane
22. ctt-1,2,4-Trimethylcyclohexane
23. ctc-1,2,4-Trimethylcyclohexane
24. 1,1,2-Trimethylcyclohexane
25. Isobutylcyclopentane
26. Isopropylcyclohexane
27. n-Butylcyclopentane
28. Isobutylcyclohexane
29. t-1-Methyl-2-propylcyclohexane
30. t-1-Methyl-2-(4MP)cyclopentane

Separation of Olefins



Excellent Peak Shape and Resolution

Sample:

1. 3-Methyl-1-butene
2. 1-Pentene
3. 2-Methyl-1-butene
4. 2-Methyl-1,3-butadiene
5. trans-2-Pentene
6. cis-2-Pentene
7. 4-Methylpentene-1
8. 1-Hexene
9. 2-Methylpentene-2
10. trans-2-Hexene
11. cis-2-Hexene
12. 1-Heptene
13. trans-3-Heptene
14. cis-3-Heptene
15. trans-2-Heptene
16. cis-2-Heptene
17. 1-Octene
18. trans-2-Octene
19. cis-2-Octene
20. 1-Nonene
21. trans-3-Nonene
22. cis-3-Nonene
23. trans-2-Nonene
24. cis-2-Nonene
25. 1-Decene

ASTM D5441

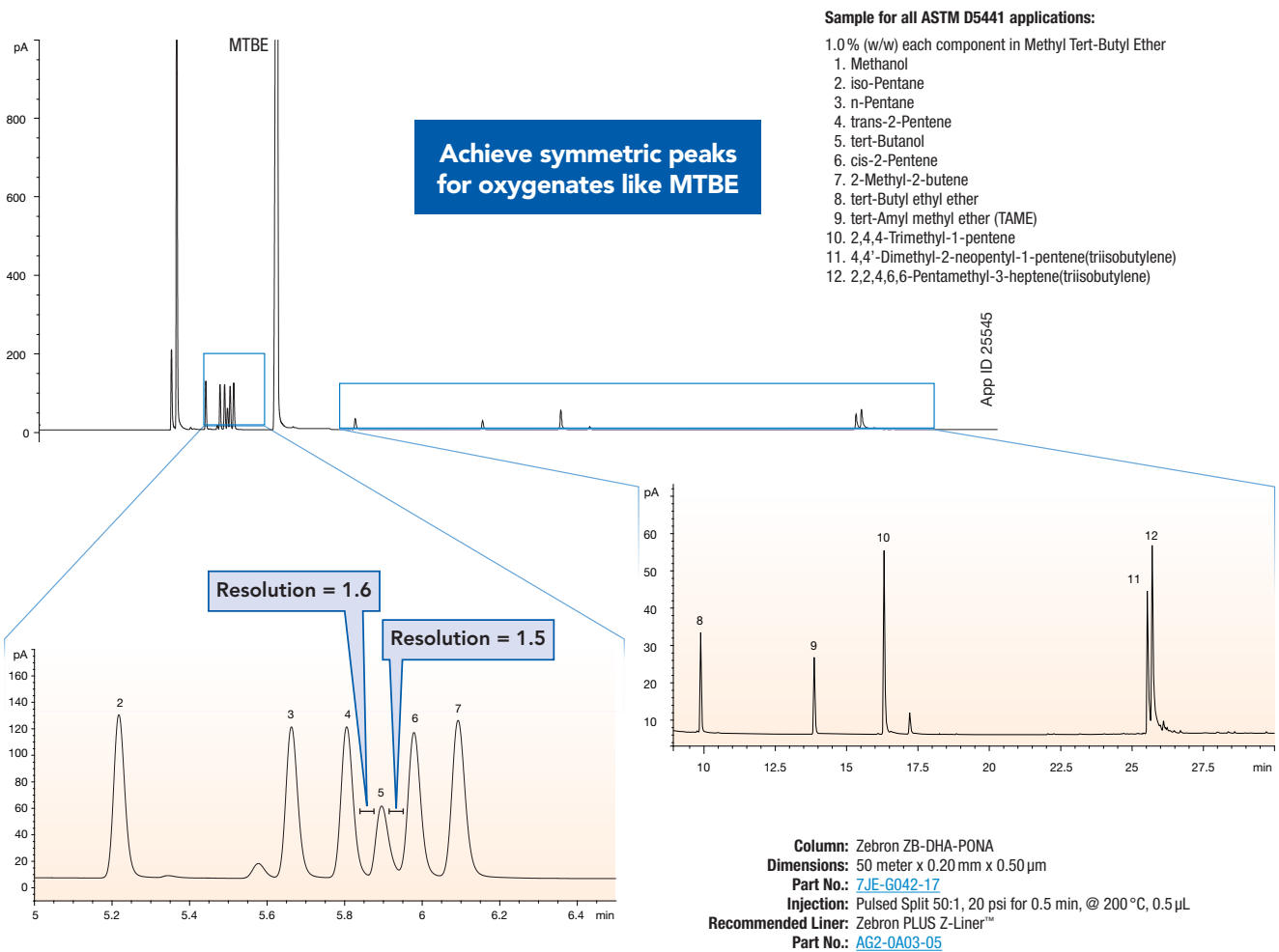
Analysis of MTBE and Related Impurities: ASTM D5441

ASTM D5441 is a gas chromatography analysis used to measure Methyl-t-Butyl Ether (MTBE) as it's purity is critical for the performance of spark ignition fuel.

Zebron ZB-DHA-PONA easily identifies impurities left during the manufacturing process of MTBE and that no contaminants were introduced in its storage or shipment. This ASTM D5441 analysis demonstrates both optimal peak shape and resolution with a Zebron ZB-DHA-PONA GC column:

- Achieve symmetric peaks for oxygenates like MTBE
- Meet and exceed ASTM D5441 resolution requirements

Analysis of MTBE and related compounds on Zebron ZB-DHA-PONA by GC-FID



Column: Zebron ZB-DHA-PONA
Dimensions: 50 meter x 0.20 mm x 0.50 µm
Part No.: 7JE-G042-17
Injection: Pulsed Split 50:1, 20 psi for 0.5 min, @ 200 °C, 0.5 µL
Recommended Liner: Zebron PLUS Z-Liner™
Part No.: AG2-0A03-05
Carrier Gas: Helium @ 0.9 mL/min (Constant Flow)
Oven Program: 40 °C for 13 min, to 180 °C @ 10 °C/min for 3 min
Detector: FID @ 250 °C

Zebron ZB-DHA-PONA Exceeds ASTM D5441 Resolution Requirements

	Resolution	
Analyte	**ASTM D5441 Requirement**	**Zebron ZB-DHA-PONA**
Trans-2-Pentene and Tert-Butanol	Not less than 1.3	1.6
Tert-Butanol and Cis-2-Pentene	Not less than 1.3	1.5

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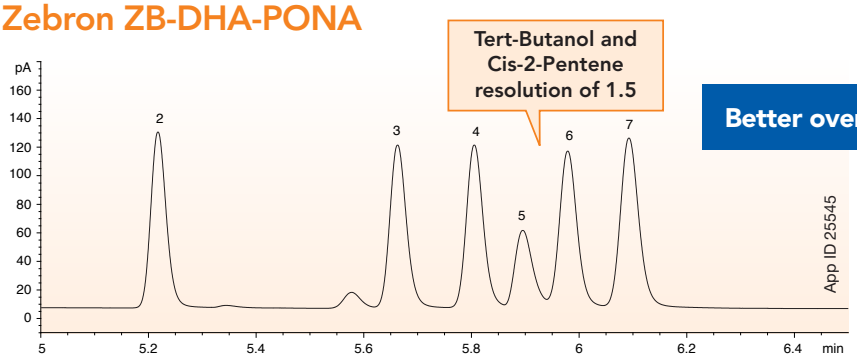
Improved Peak Shape and Resolution for ASTM D5441

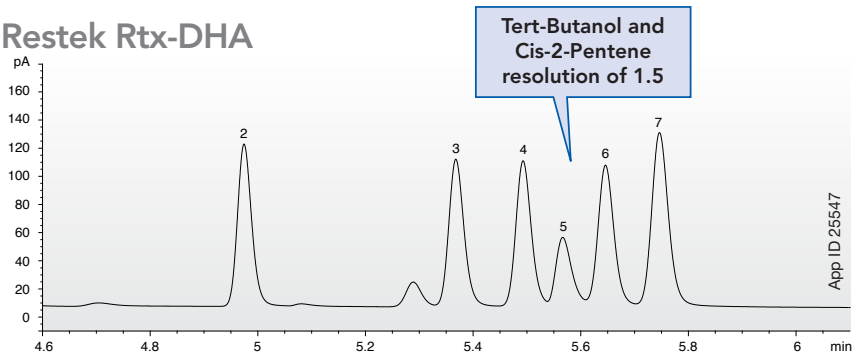
By switching to a Zebron ZB-DHA-PONA for the analysis of Methyl-t-Butyl Ether (MTBE) and related compounds, you gain optimal separation of DHA critical pairs with symmetric peak shape.

		Resolution			
Analyte Peaks	ASTM Requirement	Zebron ZB-DHA-PONA	Restek® Rtx®-DHA	Supelco® Petrocol® DH 50.2	Agilent® HP®-PONA
Trans-2-Pentene and Tert-Butanol	Not less than 1.3	1.6	1.4	2.1	1.7
Tert-Butanol and Cis-2-Pentene	Not less than 1.3	1.5	1.5	0.8	1.2

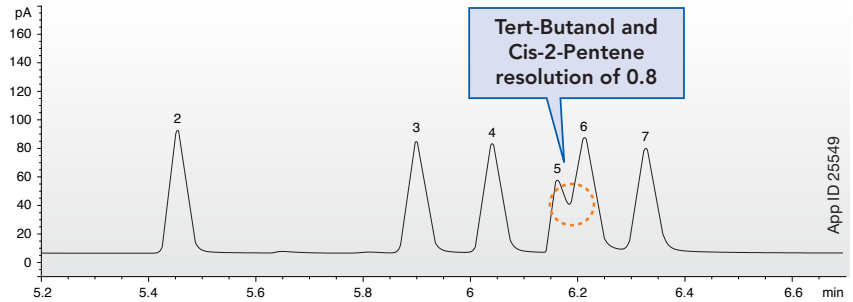
Zebron ZB-DHA-PONA



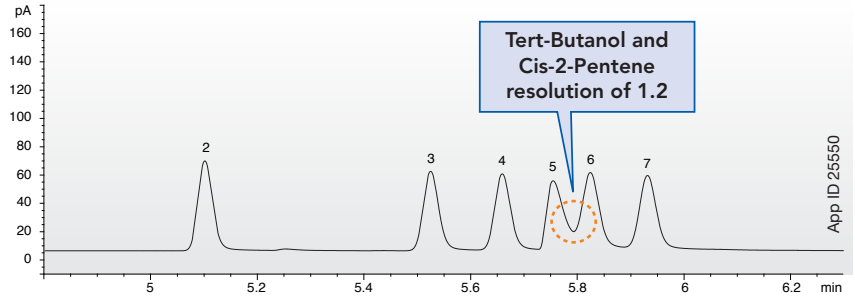
Restek Rtx-DHA



Supelco Petrocol DH 50.2



Agilent HP-PONA



GC Conditions for all columns:

Columns: As noted
Dimensions: 50 meter x 0.20 mm x 0.50 µm
Part No.: 7JE-G042-17
Injection: Pulse Split 50:1, 20 psi for 0.5 min, @ 200 °C, 0.5 µL
Recommended Liner: Zebron PLUS Z-Liner™
Part No.: AG2-0A03-05
Carrier Gas: Helium @ 0.9 mL/min (Constant Flow)
Oven Program: 40 °C for 13 min, to 180 °C at 10 °C/min for 3 min
Detector: FID @ 250 °C

Comparative separations may not be representative of all applications.

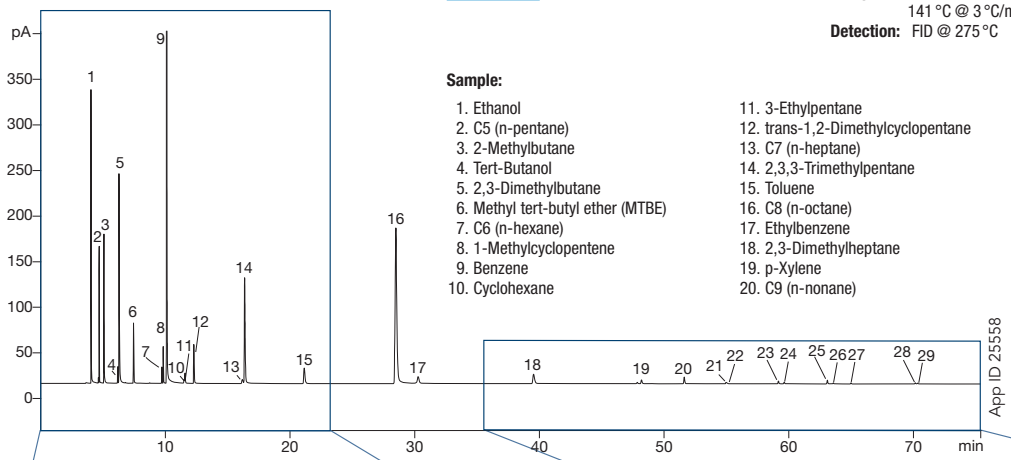
ASTM D6730

Determination of Individual Components in Spark Ignition Engine Fuels

ASTM D6730 is an important standard test method for the determination of individual components in Spark Ignition Engine Fuels. By using a 100 meter Zebron ZB-DHA-PONA GC column in conjunction with the ZB-DHA-PONA-TUNE tuning column, you can achieve High-Resolution Gas Chromatography separation of necessary critical pairs.

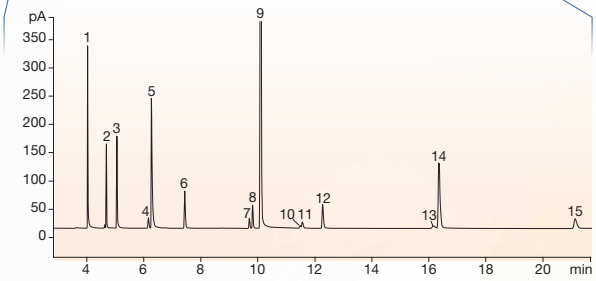
Column 1 (Tuning): Zebron ZB-DHA-PONA-TUNE
Dimensions: 5 meter x 0.25 mm x 1.0 µm
Part No.: 7AG-G042-22
Column 2: Zebron ZB-DHA-PONA
Dimensions: 100 meter x 0.25 mm x 0.50 µm
Part No.: 7MG-G042-17

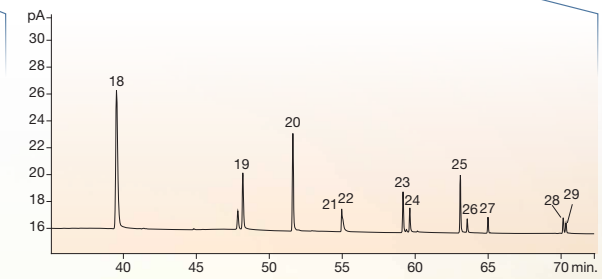
Recommended Column Union: AG0-4716
Injection: Split 150:1 @ 200 °C, 0.2 µL
Recommended Liner: Zebron PLUS Straight Z-Liner™
Part No.: AG2-0A03-05
Carrier Gas: Hydrogen @ 2 mL/min (Constant Flow)
Oven Program: 30 °C for 8.5 min, to 48 °C @ 22 °C/min. for 27 min, to 141 °C @ 3 °C/min for 1 min, to 275 °C @ 1 °C/min for 2 min
Detection: FID @ 275 °C



Sample:

1. Ethanol
2. C5 (n-pentane)
3. 2-Methylbutane
4. Tert-Butanol
5. 2,3-Dimethylbutane
6. Methyl tert-butyl ether (MTBE)
7. C6 (n-hexane)
8. 1-Methylcyclopentene
9. Benzene
10. Cyclohexane
11. 3-Ethylpentane
12. trans-1,2-Dimethylcyclopentane
13. C7 (n-heptane)
14. 2,3,3-Trimethylpentane
15. Toluene
16. C8 (n-octane)
17. Ethylbenzene
18. 2,3-Dimethylheptane
19. p-Xylene
20. C9 (n-nonane)
21. 5-Methylnonane
22. 1-Methyl-2-ethylbenzene
23. C10 (n-decane)
24. C11 (undecane)
25. 1,2,3,5-Tetramethylbenzene
26. Naphthalene
27. C12 (dodecane)
28. 1-Methylnapthalene
29. C13 (Tridecane)





Tips

- Use a ZB-DHA-PONA-TUNE with ZB-DHA-PONA to get good separation of aromatics like benzene and toluene from paraffins.
- Additional ZB-DHA-PONA dimensions such as 50 m and 150 m are available for faster or higher efficiency analyses.

www.phenomenex.com/dha-pona

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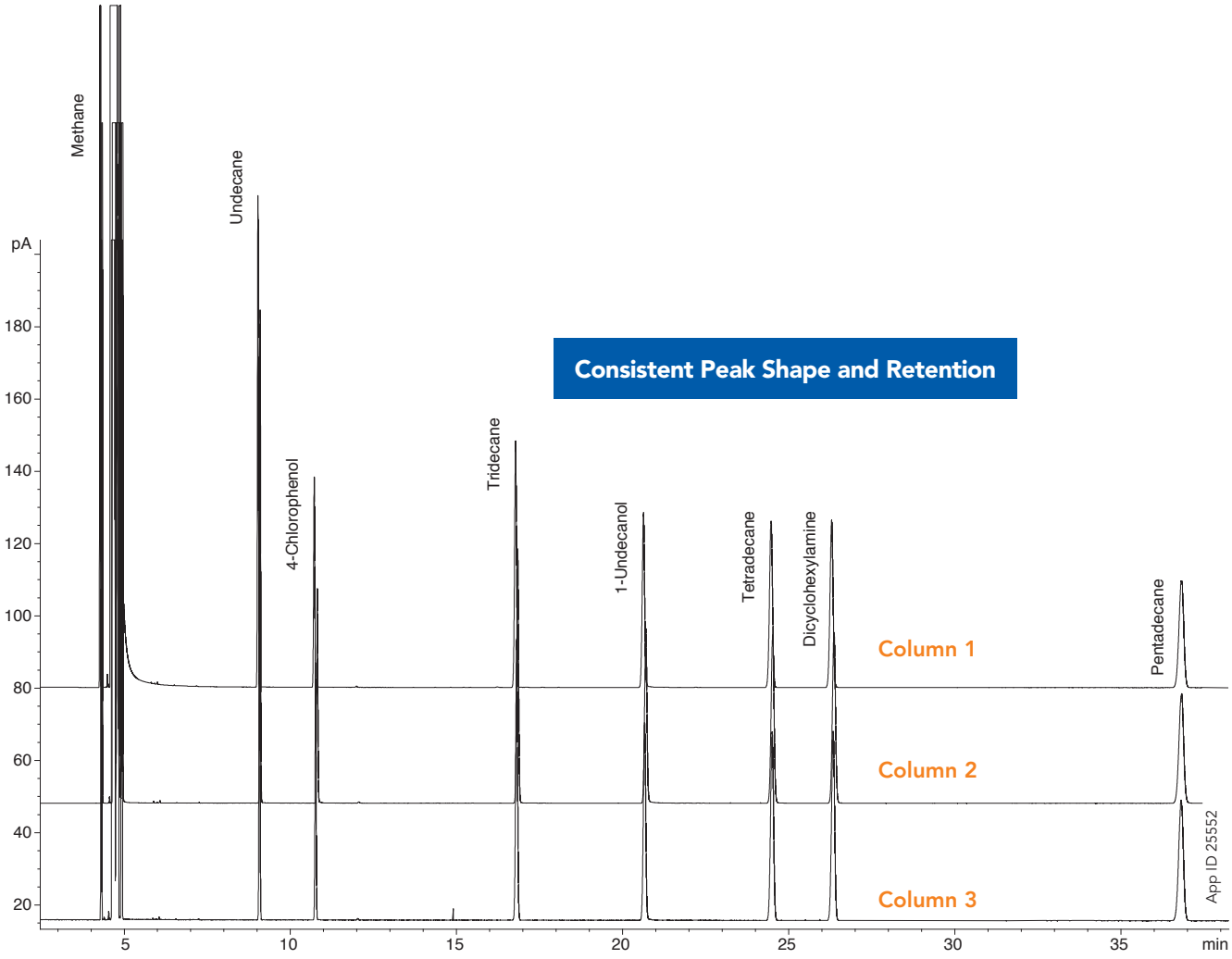
Exceptional Column Reproducibility

QC Tested for the Compounds You Analyze

We added challenging and troublesome analytes to our QC test to make sure each Zebron ZB-DHA-PONA column provides superior deactivation, improved peak shape, and exhibits high efficiency and exceptional inertness, for nonpolar hydrocarbons and polar oxygenates in gasoline, so you can be sure your column is ready to meet suitability requirements for your methods.



	Retention Factor (k)						
Column	Undecane	4-Chlorophenol	Tridecane	1-Undecanol	Tetradecane	Dicyclohexylamine	Pentadecane
1	1.11	1.5	2.91	3.80	4.69	5.12	7.56
2	1.11	1.51	2.92	3.82	4.71	5.14	7.58
3	1.10	1.49	2.89	3.77	4.66	5.08	7.5
% RSD	0.52	0.67	0.53	0.66	0.54	0.60	0.55

Low % RSD indicates high reproducibility

	Peak Skew						
Column	Undecane	4-Chlorophenol	Tridecane	1-Undecanol	Tetradecane	Dicyclohexylamine	Pentadecane
1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2	1.0	1.0	1.0	1.0	0.9	0.9	0.9
3	1.0	1.0	1.0	1.0	0.9	0.9	1

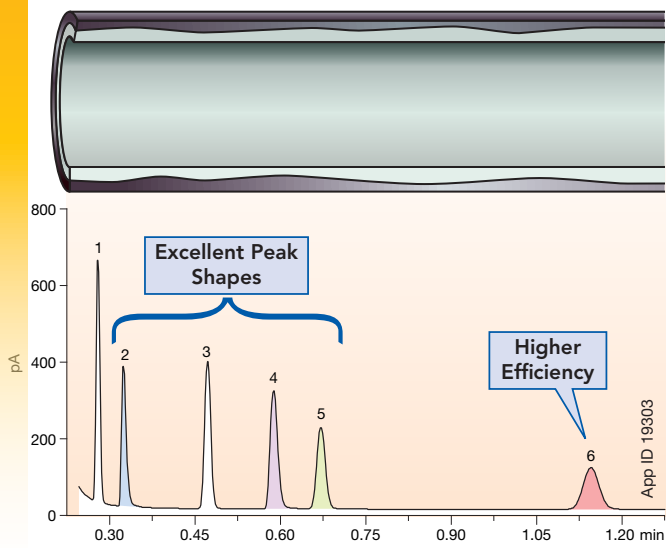
Acceptable range for skew is 0.80 to 1.5. Zebron ZB-DHA-PONA provides symmetric peaks for polar compounds (highlighted in blue) and nonpolar compounds (highlighted in yellow) which is important for DHA analysis.

Zebron ZB-1XT SimDist GC Column
Simulated Distillation

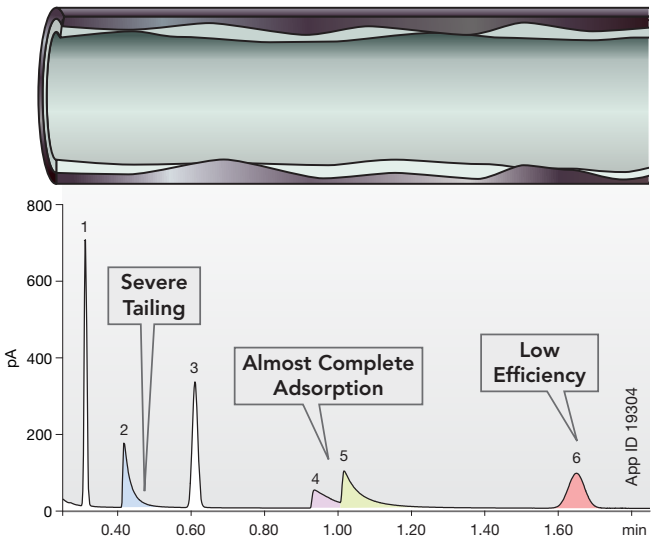
Zebron ZB-1XT SimDist GC Columns are designed to meet the rigorous requirements of ASTM, EN, and other specialized methods for the fuels industry.

- Uniform Glass Infusion™ Technology Coating provides sharper peaks and higher efficiency.
- Columns are individually tested to ensure excellent reproducibility and overall performance for SimDist critical compounds.
- 45-70% Higher column efficiency than traditional metal GC columns.
- Improved lifetime and resolution of C50/C52 hour after hour.
- 100% Risk-Free Guarantee.

Glass Infused ZB-1XT



Not Glass Infused



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

Zebron ZB-1XT SimDist Column Selection per ASTM method

ASTM Method	Ranges	Applications	Recommended Column	Description
D7169	C9-C100	Crude Oil	7AK-G026-05	ZB-1XT SimDist, 5 m x 0.53 mm x 0.15 µm
D7169	C9-C100	Vacuum Distillates	7AK-G026-55	ZB-1XT SimDist, 5 m x 0.53 mm x 0.09 µm
D6352	C10-C90	Petroleum Distillates	7AK-G026-05	ZB-1XT SimDist, 5 m x 0.53 mm x 0.15 µm
D2887X	C10-C60	Petroleum Fractions	7AK-G026-05	ZB-1XT SimDist, 5 m x 0.53 mm x 0.15 µm
D2887	C5-C44	Petroleum Fractions	7CK-G026-35	ZB-1XT SimDist, 10 m x 0.53 mm x 2.65 µm
D3710	C4-C15	Gasoline Fractions	7CK-G026-35	ZB-1XT SimDist, 10 m x 0.53 mm x 2.65 µm

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Zebron ZB-1HT Inferno™ GC Column

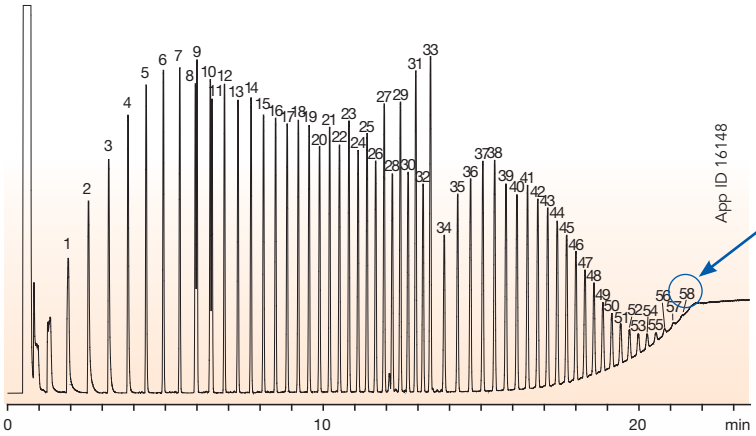
High Temperature Hydrocarbon Analysis

Rugged GC Performance to 430 °C!
Zebron Inferno columns allow you to push your standard analysis up to 430 °C for increased lab productivity and improved performance – especially if you struggle with high boiling compounds, contaminants, or carry-overs.

Zebron Inferno columns have the inertness and the temperature stability needed to separate high molecular weight compounds. These high boilers require a thermally rugged column with low bleed and able to provide optimal resolution like the ZB-1HT.

- Better peak shape
- Improved separation
- More analytes detected

Great Separation of High Boiling Hydrocarbons (ASTM Method D6352)



Column: Zebron ZB-1HT Inferno
Dimensions: 5 meter x 0.53 mm x 0.10 µm
Part No.: 7AK-G014-02
Injection: On-Column @ 43 °C, 0.1 µL
Carrier Gas: Helium @ 4.4 mL/min (constant flow)
Oven Program: 40 °C for 0.5 min to 430 °C @ 20 °C/min for 10 min
Detector: FID @ 430 °C

Easily Elute Hydrocarbons Up To C90

Zebron ZB-1HT Inferno can operate up to 430 °C, allowing C90 to elute on temperature ramp to meet ASTM requirements!

Sample:

1. C10	13. C20	25. C32	37. C48	49. C72
2. C11	14. C21	26. C33	38. C50	50. C74
3. C12	15. C22	27. C34	39. C52	51. C76
4. C13	16. C23	28. C35	40. C54	52. C78
5. C14	17. C24	29. C36	41. C56	53. C80
6. C15	18. C25	30. C37	42. C58	54. C82
7. C16	19. C26	31. C38	43. C60	55. C84
8. C17	20. C27	32. C39	44. C62	56. C86
9. Pristane	21. C28	33. C40	45. C64	57. C88
10. C18	22. C29	34. C42	46. C66	58. C90
11. Phytane	23. C30	35. C44	47. C68	
12. C19	24. C31	36. C46	48. C70	

Note: Sample was a combination of POLYWAX® 655 and retention time markers C8-C40 in CS_2/Chloroform

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Zebron GC Columns

ZB-1HT Inferno

Zebron Gas Management Filters

For Ultra Pure GC Gas Supply

No Diffusion and No Leaks with Dual Wall Housing!

More protection and less contamination with an inner glass wall and better safety with a plastic outer wall.

Higher Capacity

The higher capacity of Zebron gas management filters means less need for replacement and an increase in system uptime, saving you time and money.

Easy Filter Installation in Under 20 Seconds!

Avoid system downtime by attaching a new filter to your gas line in seconds!

Never Disrupt Your Instrument!

The integrated one way valve on the Zebron gas management base units allow for quick and easy filter changes without disrupting the Instrument.

Easily Know When to Replace Your Filter!

1

Color Change

The indicator on each Zebron gas management filter will display when it is time to change your filter.*

2

Electronic Indicator

The optional electronic indicator will alert you with an audible warning on when to change your filter based on typical usage.

Universal Compatibility

No need to change your existing connecting unit. Simply remove the old filter, replace the O-ring, click a new filter in, and tighten the connection with the ring nut! (Part No.: AG6-1060).

*Hydrocarbon filters do not include a color indicator

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Zebron Gas Management Traps

For Ultra Pure GC Gas Supply

Click-on Trap

Never Disrupt Your Instrument!
Attach a new filter in under 10 seconds. Once the connecting unit is installed, you will be able to change traps as often as needed without interrupting the instrument.

High Pressure Durability

The Click-on trap is completely made out of stainless steel and can withstand high pressures. The seals at each end of the trap will only be punctured when the Click-on connector is locked in place.

Know When to Replace

The optional electronic indicator displays when scheduled replacement or maintenance is due.

Secure Wall Mount

These wall mounting clamps will EASILY help attach a Zebron gas trap to a wall or surface.

Click-On Connection

The Click-on trap connectors allow inline cartridges to be exchanged without introducing contaminants. Spring loaded check valves seal when a filter is removed and open only when a new filter has been locked in place.

Gas Management
Ordering Information

Zebron™ Gas Management

Zebron Gas Management Filters

Part No.	Description	Unit	Price
AG6-1040	Gas Filter Universal	ea	$ 185
AG6-1070	Gas Filter Universal (Helium)	ea	210
AG6-1010	Gas Filter Oxygen	ea	160
AG6-1020	Gas Filter Moisture	ea	160
AG6-1030	Gas Filter Hydrocarbon	ea	160
AG6-1050	Gas Filter Hydrocarbon/Moisture for LC-MS	2/pk	211
AG6-1060	Ring Nut for Gas Filter	ea	16

Zebron Gas Management Traps

Part No.	Description	Unit	Price
AG6-3140	Click-on Universal Trap	ea	$ 338
AG6-3110	Click-on Oxygen Trap	ea	256
AG6-3120	Click-on Moisture Trap	ea	294
AG6-3130	Click-on Hydrocarbon Trap	ea	294
AG6-3150	Click-on Carbon Dioxide Trap	ea	307

Zebron Connecting Units

Part No.	Description	Unit	Price
AG6-2101	1-position Connecting Unit ¼ in. Brass	ea	$ 206
AG6-2102	2-position Connecting Unit ¼ in. Brass	ea	391
AG6-2103	4-position Connecting Unit ¼ in. Brass	ea	747
AG6-2201	1-position Connecting Unit ⅛ in. Brass	ea	206
AG6-2202	2-position Connecting Unit ⅛ in. Brass	ea	391
AG6-2203	4-position Connecting Unit ⅛ in. Brass	ea	747
AG6-2204	High flow 2-position Connecting Unit for LC-MS	ea	697
AG6-2205	Particle Filter for LC-MS	ea	98
AG6-2206	O-ring Replacement for Gas Filter Baseplate	20/pk	29

Part No.	Description	Unit	Price
AG6-2301	1-position Connecting Unit ¼ in. Stainless Steel	ea	$ 320
AG6-2302	2-position Connecting Unit ¼ in. Stainless Steel	ea	600
AG6-2303	4-position Connecting Unit ¼ in. Stainless Steel	ea	950
AG6-2304	1-position Connecting Unit ⅛ in. Stainless Steel	ea	320
AG6-2305	2-position Connecting Unit ⅛ in. Stainless Steel	ea	600
AG6-2306	4-position Connecting Unit ⅛ in. Stainless Steel	ea	950

Zebron Base Electronic Indicator and Other Accessories

Part No.	Description	Unit	Price
AG6-3160	⅛ in. Brass Click-on Connector Set	2/pk	$ 39
AG6-3170	¼ in. Brass Click-on Connector Set	2/pk	56
AG6-3180	Wall-mounting Clamp Set for Gas Traps	2/pk	150
AG6-4150	⅛ in. Stainless Steel Click-on Connector Set	2/pk	60
AG6-4160	¼ in. Stainless Steel Click-on Connector Set	2/pk	70
AG6-3190	O-ring Replacement Set for Gas Trap	20/pk	25
AG6-4110	Electronic Indicator for Gas Trap	ea	60
AG6-4120	Electronic Indicator for Gas Filter	ea	60
AG6-4130	Electronic Indicator for LC-MS Filter	ea	60


Electronic Indicator


Wall-mounting Clamp Set


O-ring

Brass Click-on Connector

First time ordering Zebron Click-on Gas Traps?

Be sure to order the **brass or stainless steel connector** with your first trap.


AG6-3160 (⅛ in.)


AG6-3170 (¼ in.)

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GC Column
Ordering Information

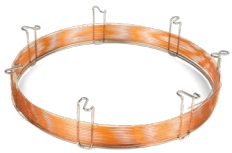
Zebron™ GC Columns

Zebron ZB-DHA-PONA

ID (mm)	df (µm)	Temp. Limits °C	Part No.	Price
50-Meter				
0.2	0.5	-60 to 360/370C	7JE-G042-17	$ 799
100-Meter				
0.25	0.5	-60 to 360/370C	7MG-G042-17	$ 950
150-Meter				
0.25	1	-60 to 340/360C	7QG-G042-22	$ 1,400

Zebron ZB-DHA-PONA-TUNE

ID (mm)	df (µm)	Temp. Limits °C	Part No.	Price
5-Meter				
0.25	1	-60 to 340/360C	7AG-G042-22	$ 95



Zebron ZB-1XT SimDist

ID(mm)	df (µm)	Temp. Limits °C	Part No.	Price
5-Meter				
0.53	0.09	-60 to 450	7AK-G026-55	$ 430
0.53	0.15	-60 to 450	7AK-G026-05	430
5-Meter with 2-Meter Guardian™ Integrated Guard				
0.53	0.09	-60 to 450	7AK-G026-55-GGT	$ 450
0.53	0.15	-60 to 450	7AK-G026-05-GGT	450
10-Meter				
0.53	0.15	-60 to 450	7CK-G026-05	$ 425
0.53	0.88	-60 to 450	7CK-G026-49	600
0.53	2.65	-60 to 450	7CK-G026-35	490
15-Meter				
0.53	0.25	-60 to 450	7EK-G026-11	$ 530

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.

Zebron ZB-1HT Inferno

ID (mm)	df (µm)	Temp. Limits °C	Part No.	
5-Meter				
0.53	0.10	-60 to 400/430C	7AK-G014-02	$ 350

To Order Zebron GC Columns, go to www.phenomenex.com/Zebron

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- Injection Type
- GC System
- Your Current Liner Part Number

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Zebron™
GC Columns

Zebron ZB-DHA-PONA

The Detailed Hydrocarbon Analysis (DHA) GC column designed specifically for DHA, PONA, PIONA, and PIANO analysis

Australia
t: +61 (0)2-9428-6444
auinfo@phenomenex.com

Austria
t: +43 (0)1-319-1301
anfrage@phenomenex.com

Belgium
t: +32 (0)2 503 4015 (French)
t: +32 (0)2 511 8666 (Dutch)
beinfo@phenomenex.com

Canada
t: +1 (800) 543-3681
info@phenomenex.com

China
t: +86 400-606-8099
cninfo@phenomenex.com

Denmark
t: +45 4824 8048
nordicinfo@phenomenex.com

Finland
t: +358 (0)9 4789 0063
nordicinfo@phenomenex.com

France
t: +33 (0)1 30 09 21 10
franceinfo@phenomenex.com

Germany
t: +49 (0)6021-58830-0
anfrage@phenomenex.com

India
t: +91 (0)40-3012 2400
indiainfo@phenomenex.com

Ireland
t: +353 (0)1 247 5405
eireinfo@phenomenex.com

Italy
t: +39 051 6327511
italiainfo@phenomenex.com

Luxembourg
t: +31 (0)30-2418700
nlinfo@phenomenex.com

Mexico
t: 01-800-844-5226
tecnicomx@phenomenex.com

The Netherlands
t: +31 (0)30-2418700
nlinfo@phenomenex.com

New Zealand
t: +64 (0)9-4780951
nzinfo@phenomenex.com

Norway
t: +47 810 02 005
nordicinfo@phenomenex.com

Portugal
t: +351 221 450 488
ptinfo@phenomenex.com

Singapore
t: +65 800-852-3944
sginfo@phenomenex.com

Spain
t: +34 91-413-8613
espinfo@phenomenex.com

Sweden
t: +46 (0)8 611 6950
nordicinfo@phenomenex.com

Switzerland
t: +41 (0)61 692 20 20
swissinfo@phenomenex.com

Taiwan
t: +886 (0) 0801-49-1246
twinfo@phenomenex.com

United Kingdom
t: +44 (0)1625-501367
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USA
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