



Advance Pesticide Testing Using Zebron GC Columns



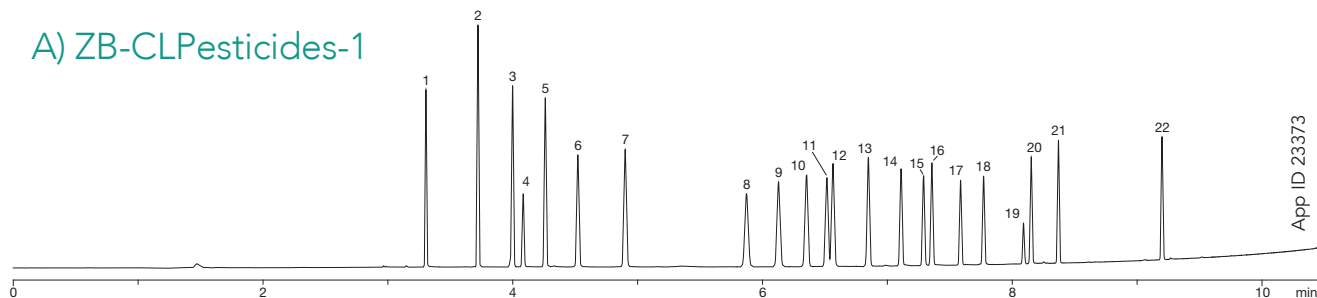
www.phenomenex.com/Pesticides

ZB-CLPesticides-1 and -2

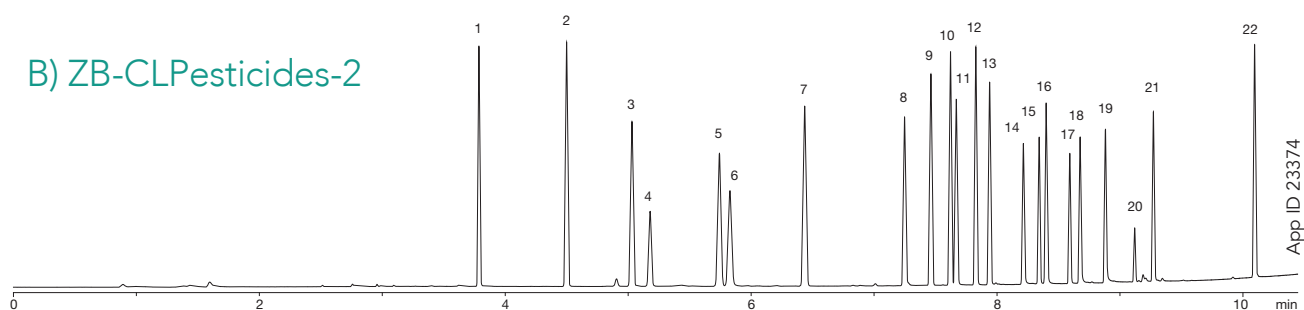
Guaranteed, Performance for Chlorinated Pesticides

EPA Method 8081 Using Hydrogen

A) ZB-CLPesticides-1



B) ZB-CLPesticides-2



Column: As listed

Dimensions: A) 30 meters x 0.32 mm x 0.32 μ m
B) 30 meters x 0.32 mm x 0.25 μ m

Part No.: A) 7HM-G028-51
B) 7HM-G029-11

Injection: Splitless @ 250 $^{\circ}$ C, 1 μ L

Carrier Gas: Hydrogen @ 3.5 mL/min (constant flow)

Oven Program: 85 $^{\circ}$ C for 0.5 min to 195 $^{\circ}$ C @ 45 $^{\circ}$ C/min for 3 min to 330 $^{\circ}$ C @ 30 $^{\circ}$ C/min

Detector: Electron Capture (ECD) @ 330 $^{\circ}$ C

Liner: AG0-8499 (Single Taper with Wool at Bottom)

Septum: AG0-4696 (PhenoRed™-400)

Inlet Seal: AG0-8620 (Easy Seals™)

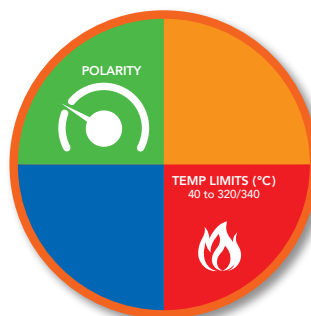
Sample: Analytes are 100ng/mL in hexane

- | | |
|------------------------|-------------------------------|
| 1. 2,4,5,6-TCMX (Surr) | 12. 4,4'-DDE |
| 2. α -BHC | 13. Dieldrin |
| 3. γ -BHC | 14. Endrin |
| 4. β -BHC | 15. 4,4'-DDD |
| 5. δ -BHC | 16. Endosulfan II |
| 6. Heptachlor | 17. 4,4'-DDT |
| 7. Aldrin | 18. Endrin aldehyde |
| 8. Heptachlor epoxide | 19. Methoxychlor |
| 9. trans-Chlordane | 20. Endosulfan sulfate |
| 10. cis-Chlordane | 21. Endrin ketone |
| 11. Endosulfan I | 22. Decachlorobiphenyl (Surr) |

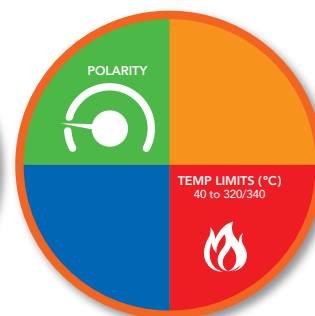
- Guaranteed alternative to Restek® Rtx®-CLPesticides and Rtx-CLPesticides2
- Resolve multiple pesticide classes with enhanced selectivity
- Run 7 EPA methods without changing columns (EPA 8081/8081 extended, 8082, 8151, 504, 505, 508, and 552)
- Recommended for dual-column chlorinated pesticides, herbicides, and haloacetic acids (HAAs), EPA Methods (8081, 8082, 8151, 504, 505, 508, and 552)

Learn more at www.phenomenex.com/CLP

Column Profiles



ZB-CLPesticides-1

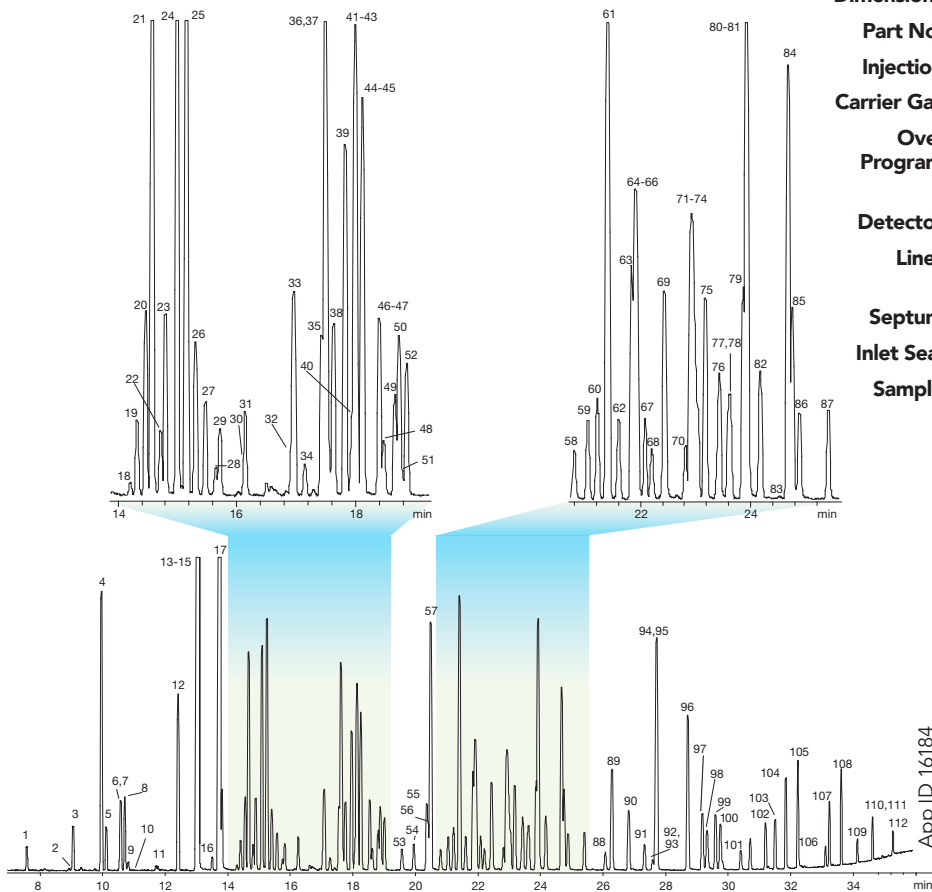


ZB-CLPesticides-2

ZB-MultiResidue™ -1 and -2

Optimized Selectivity for All Detection Methods

Multi-Residue Pesticide Screen by GC/MS



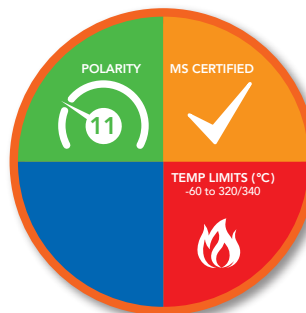
Column: Zebron™ ZB-MultiResidue-1
Dimensions: 30 meter x 0.25 mm x 0.25 µm
Part No.: 7HG-G016-11
Injection: Splitless @ 260°C, 1 µL
Carrier Gas: Helium @ 0.9 mL/min (constant flow)
Oven: 80°C for 0.5 min to 150°C @
Program: 10°C/min to 240°C @ 4°C/min to
320°C @ 15°C/min for 3 min
Detector: MSD @ 320°C; 45-400 amu
Liner: AG0-8499 (Single Taper with
Wool at Bottom)
Septum: AG0-4696 (PhenoRed™-400)
Inlet Seal: AG0-8620 (Easy Seals™)
Sample: Analytes are 1 ppm in
dichloromethane

View the full 112 compound list at www.phenomenex.com/Pesticides

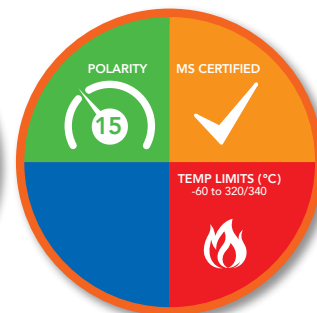
- Novel phases optimized for common pesticide isomers with enhanced selectivity for environmental samples
- Improved inertness for decreased breakdown of sensitive analytes like DDT and Endrin
- Well-suited for testing complex, multi-class pesticide lists by GC/MS and GC/MS/MS
- Recommended for all pesticide, herbicide, and insecticide classes

Find out more at www.phenomenex.com/MR

Column Profiles



ZB-MultiResidue-1



ZB-MultiResidue-2

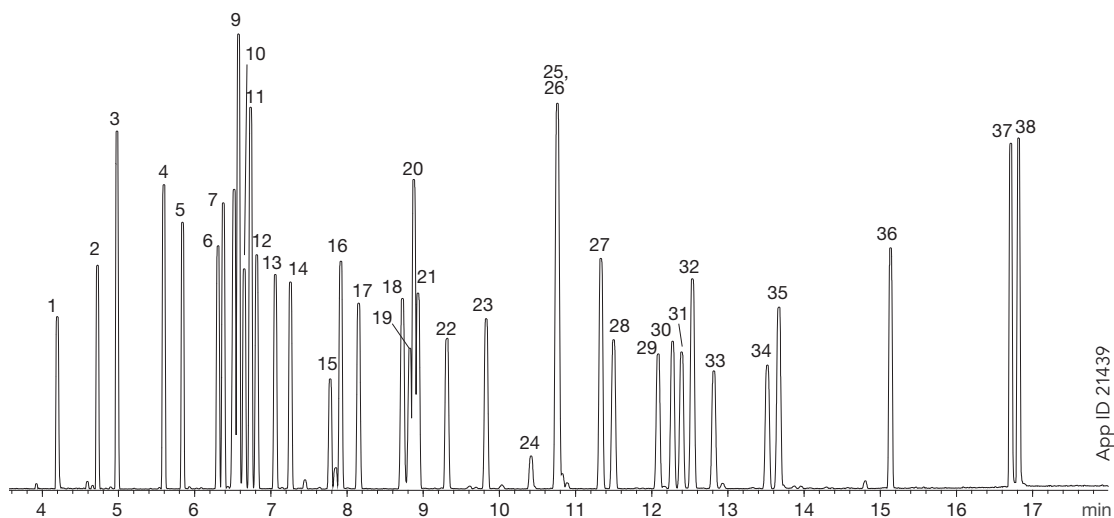
ZB-SemiVolatiles

Supreme Inertness for Tough Pesticide Samples

Common Pesticides in Drinking Water by GC/MS

Column: Zebron™ ZB-SemiVolatiles
Dimensions: 30 meter x 0.25 mm x 0.25 μm
Part No.: 7HG-G027-11
Injection: Pulsed Splitless @ 260 °C, 1 μL @ 30 psi for 0.55 min
Carrier Gas: Helium @ 1.2 mL/min (constant flow)

Oven Program: 80 °C for 0.75 min to 190 °C @ 35 °C/min to 240 °C @ 5 °C/min to 300 °C @ 20 °C/min for 2 min
Detector: MSD @ 320; 30-450 amu
Liner: AG0-8499 (Single Taper with Wool at Bottom)
Septum: AG0-4696 (PhenoRed™-400)
Inlet Seal: AG0-8620 (Easy Seals™)



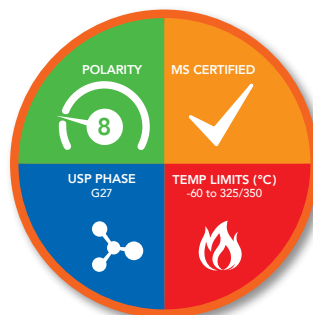
Sample:

- | | | | |
|-------------------------------|-----------------------------|------------------------|----------------------------|
| 1. Hexachloro-cyclopentadiene | 10. γ-BHC | 20. Dacthal (DCPA) | 30. Chlorobenzilate |
| 2. Etridiazole | 11. Pentachloronitrobenzene | 21. Aldrin | 31. Endosulfan II |
| 3. Chloroneb | 12. β-BHC | 22. 4,4-Dibromophenol | 32. DDD |
| 4. Propachlor | 13. Chlorothalonil | 23. Heptachlor epoxide | 33. Endrin aldehyde |
| 5. Trifluralin | 14. δ-BHC | 24. γ-Chlordane | 34. Endosulfan sulfate |
| 6. α-BHC | 15. Metribuzin | 25. α-Chlordane | 35. DDT (Chlorophenothane) |
| 7. Hexachlorobenzene | 16. Alachlor | 26. Endosulfan II | 36. Methoxychlor |
| 8. Simazine | 17. Heptachlor | 27. DDE | 37. cis-Permethrin |
| 9. Atrazine | 18. Metolachlor | 28. Dieldrin | 38. trans-Permethrin |
| | 19. Cyanazine | 29. Endrin | |

- Improve peak shapes for acids, amines, and other notoriously active pesticide compounds
- Detect down to ultra-low levels (0.2 ng on-column) and improve critical pair resolution
- Inert and rugged performance with Enviro-Inert™ Technology
- Recommended for Semi-volatiles (SVOCs), PAHs, PBDEs, and EPA Methods (525, 610, 625, 8100, 8270D)

Discover it all at www.phenomenex.com/SV

Column Profile



ZB-SemiVolatiles



Zebron GC Columns offer reliability, reproducibility, and robustness when performing pesticide testing. Easily detect trace pesticide levels and get sensitive, accurate results.

Quick Questions?

Live chat with our team of technical experts

Bigger Questions?

Meet PhenoLogix, our analytical lab that will customize a solution for you

Use the GC Column Finder

Select by phase, part number, official method, or application in less than 1 minute

Choose the Right Liner

Easily select in under 1 minute using the GC Liner Finder

Get All These Tools and More at www.phenomenex.com/Pesticides

guarantee

If Zebron columns do not provide you with equivalent or better separations as compared to any other GC column of the same phase and comparable dimensions, return the column with comparative data within 45 days for a FULL REFUND.

More GC columns, kits, and accessories available at www.phenomenex.com!

Zebron Ordering Information

ZB-CLPesticides-1 and -2

ZB-CLPesticides-1 GC Columns

Length (m)	ID (mm)	df (µm)	Temperature Limits (°C)	Part No.
30	0.25	0.25	40 to 320/340	7HG-G028-11
30	0.32	0.32	40 to 320/340	7HM-G028-51
30	0.32	0.50	40 to 320/340	7HM-G028-17
30	0.53	0.50	40 to 320/340	7HK-G028-17

ZB-CLPesticides-2 GC Columns

Length (m)	ID (mm)	df (µm)	Temperature Limits (°C)	Part No.
30	0.25	0.20	40 to 320/340	7HG-G029-10
30	0.32	0.25	40 to 320/340	7HM-G029-11
30	0.32	0.50	40 to 320/340	7HM-G029-17
30	0.53	0.42	40 to 320/340	7HK-G029-16

ZB-MultiResidue™-1 and -2

ZB-MultiResidue-1 GC Columns

Length (m)	ID (mm)	df (µm)	Temperature Limits (°C)	Part No.
30	0.25	0.25	-60 to 320/340	7HG-G016-11
30	0.32	0.25	-60 to 320/340	7HM-G016-11
30	0.32	0.50	-60 to 320/340	7HM-G016-17
30	0.53	0.50	-60 to 320/340	7HK-G016-17

ZB-MultiResidue-2 GC Columns

Length (m)	ID (mm)	df (µm)	Temperature Limits (°C)	Part No.
30	0.25	0.20	-60 to 320/340	7HG-G017-10
30	0.32	0.25	-60 to 320/340	7HM-G017-11
30	0.53	0.50	-60 to 320/340	7HK-G017-17

ZB-SemiVolatiles

ZB-SemiVolatiles GC Columns

Length (m)	ID (mm)	df (µm)	Temperature Limits (°C)	Standard Part No.	with 5 m Guardian™ Part No.	with 10 m Guardian™ Part No.
15	0.25	0.25	-60 to 325/350	7EG-G027-11	–	–
15	0.25	0.50	-60 to 325/350	7EG-G027-17	–	–
20	0.18	0.18	-60 to 325/350	7FD-G027-08	–	–
20	0.18	0.36	-60 to 325/350	7FD-G027-53	–	–
30	0.25	0.25	-60 to 325/350	7HG-G027-11	7HG-G027-11-GGA	7HG-G027-11-GGC
30	0.25	0.50	-60 to 325/350	7HG-G027-17	7HG-G027-17-GGA	7HG-G027-17-GGC
60	0.25	0.25	-60 to 325/350	7KG-G027-11	–	–

Advance Pesticide Testing Using Zebron GC Columns

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