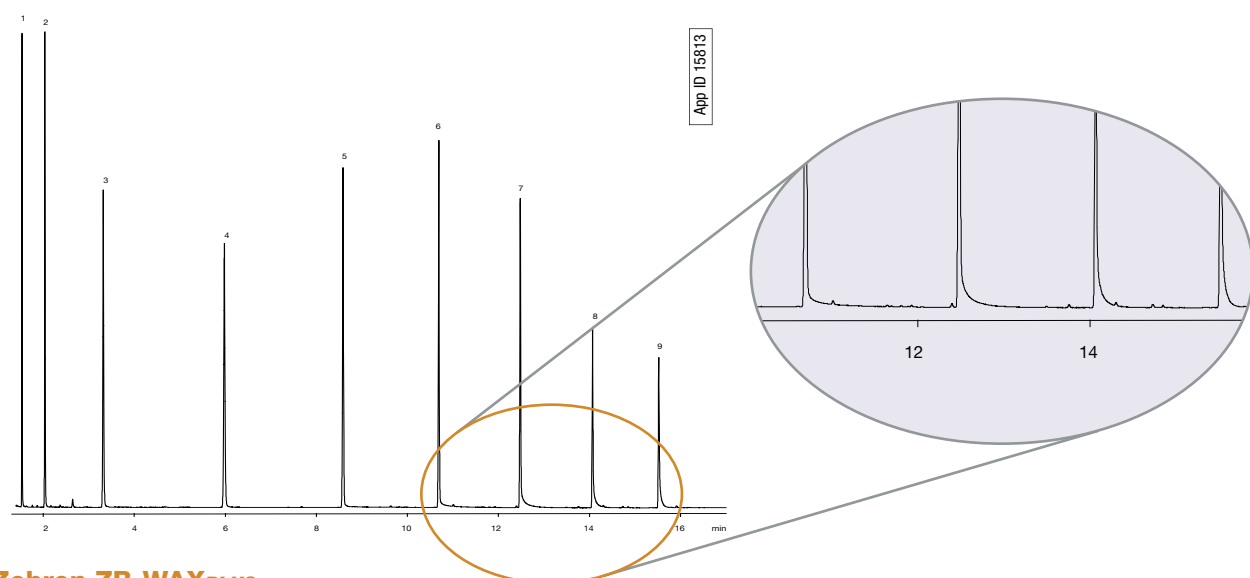


## Reduced Activity

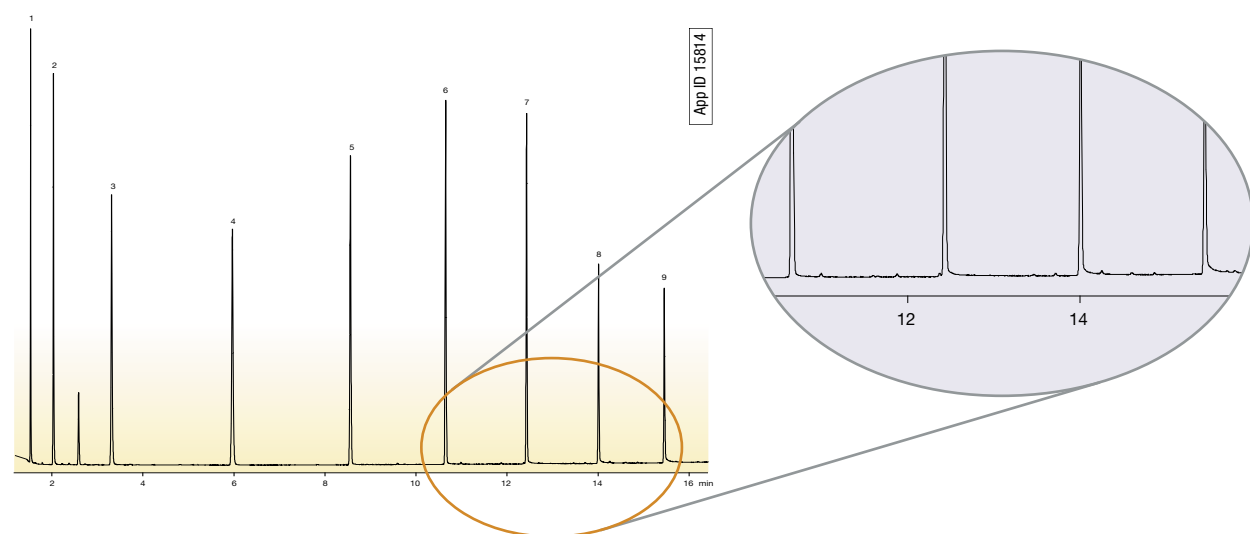
Low column activity is essential to achieving good quantitation and sensitivity. Whether you are analyzing aldehydes, acids, or pharmaceutical compounds the

ZB-WAX<sup>PLUS</sup> provides the **highest level of deactivation possible**.

### HP<sup>®</sup> INNOWax<sup>®</sup>



### Zebtron ZB-WAX<sup>PLUS</sup>



Conditions same for both columns:

**Dimension:** 30meter x 0.25mm x 0.25µm  
**Injection:** Split 100:1 @ 250°C, 1µL  
**Carrier Gas:** Constant Flow Hydrogen, 1.0mL/min  
**Oven Program:** 40°C for 5 min to 200°C at 10°C/min and hold until last peak elutes  
**Detector:** FID @ 225°C

**Sample:** 1. Propanal  
 2. Butanal  
 3. Pentanal  
 4. Hexanal  
 5. Heptanal  
 6. Octanal  
 7. Nonanal  
 8. Decanal  
 9. Undecanal

\*All columns were new, never used, prior to this testing and purchased either directly from the original manufacturer or through an authorized distributor. All testing was carefully controlled to ensure conditions were similar for all columns involved. The comparative data is not representative of every application.

## ORDERING INFORMATION

### ZEBRON™ ZB-WAX<sup>PLUS</sup> GC Capillary Column


ID(mm)	df(µm)	Temp. Limits (°C)	Part No.	Price
<b>10-Meter</b>				
0.10	0.10	20 to 250/260	7CB-G013-02	
<b>15-Meter</b>				
0.25	0.25	20 to 250/260	7EG-G013-11	
0.53	1.00	20 to 250/260	7EK-G013-22	
<b>20-Meter</b>				
0.18	0.18	20 to 250/260	7FD-G013-08	
<b>30-Meter</b>				
0.25	0.25	20 to 250/260	7HG-G013-11	
0.25	0.50	20 to 250/260	7HG-G013-17	
0.32	0.25	20 to 250/260	7HM-G013-11	
0.32	0.50	20 to 250/260	7HM-G013-17	
0.53	1.00	20 to 230/240	7HK-G013-22	
<b>60-Meter</b>				
0.25	0.25	20 to 250/260	7KG-G013-11	
0.32	0.50	20 to 250/260	7KM-G013-17	
0.53	1.00	20 to 230/240	7KK-G013-22	



If you are not completely satisfied with Zebtron™ ZB-WAX<sup>PLUS</sup>, keep the column for

# FREE.

© 2006 Phenomenex, Inc. All rights reserved. Phenomenex is a registered trademark of Phenomenex, Inc. Zebtron, ZB-WAXplus, and Engineered Self Cross-linking (ESC) are trademarks of Phenomenex, Inc. HP-INNOWax is a registered trademark of Agilent Technologies, Inc. Stabilwax is a registered trademark of Restek Corp. Phenomenex is in no way affiliated with Agilent Technologies, Inc. and Restek Corp.

 [www.phenomenex.com](http://www.phenomenex.com)  
 Phenomenex products are available worldwide. For the distributor in your country, contact Phenomenex USA, International Department by telephone, fax or e-mail: international@phenomenex.com.

 *...breaking with tradition™*

<b>USA</b> mail: 411 Madrid Ave. Torrance, CA 90501-1430 USA tel.: (310) 212-0555 fax: (310) 328-7768 email: info@phenomenex.com	<b>Puerto Rico</b> 273 Sierra Morena, Suite #104 San Juan, Puerto Rico 00926 (800) 541-HPLC (310) 328-7768 info@phenomenex.com	<b>Canada</b> 411 Madrid Ave. Torrance, CA 90501-1430 USA (800) 543-3681 (310) 328-7768 info@phenomenex.com	<b>France</b> Parc des Grillons, Bat.3 60 Route de Sartrouville 78232 Le Pecq Cedex France 01 30 09 21 10 01 30 09 21 11 franceinfo@phenomenex.com	<b>United Kingdom</b> Queens Avenue, Hurdfield Ind. Est., Macclesfield, Cheshire SK10 2BN, UK 01625-501367 01625-501796 ukinfo@phenomenex.com	<b>Ireland</b> Queens Avenue, Hurdfield Ind. Est., Macclesfield, Cheshire SK10 2BN, UK 01 247 5405 +44 1625-501796 eirinfo@phenomenex.com	<b>Germany</b> Zeppelinstr. 5 63741 Aschaffenburg Germany 06021-58830-0 06021-58830-11 anfrage@phenomenex.com	<b>New Zealand</b> P O Box 31601 Milford Auckland New Zealand 09-4780951 09-4780952 info@phenomenex.co.nz	<b>Australia</b> PO Box 4084 Lane Cove, NSW 2066 Australia 02-9428-6444 02-9428-6445 info@phenomenex.com.au
---	---	--	---	--	--	---	--	---

4324\_1

**PLUS**

Designed and Tested For Aqueous Samples



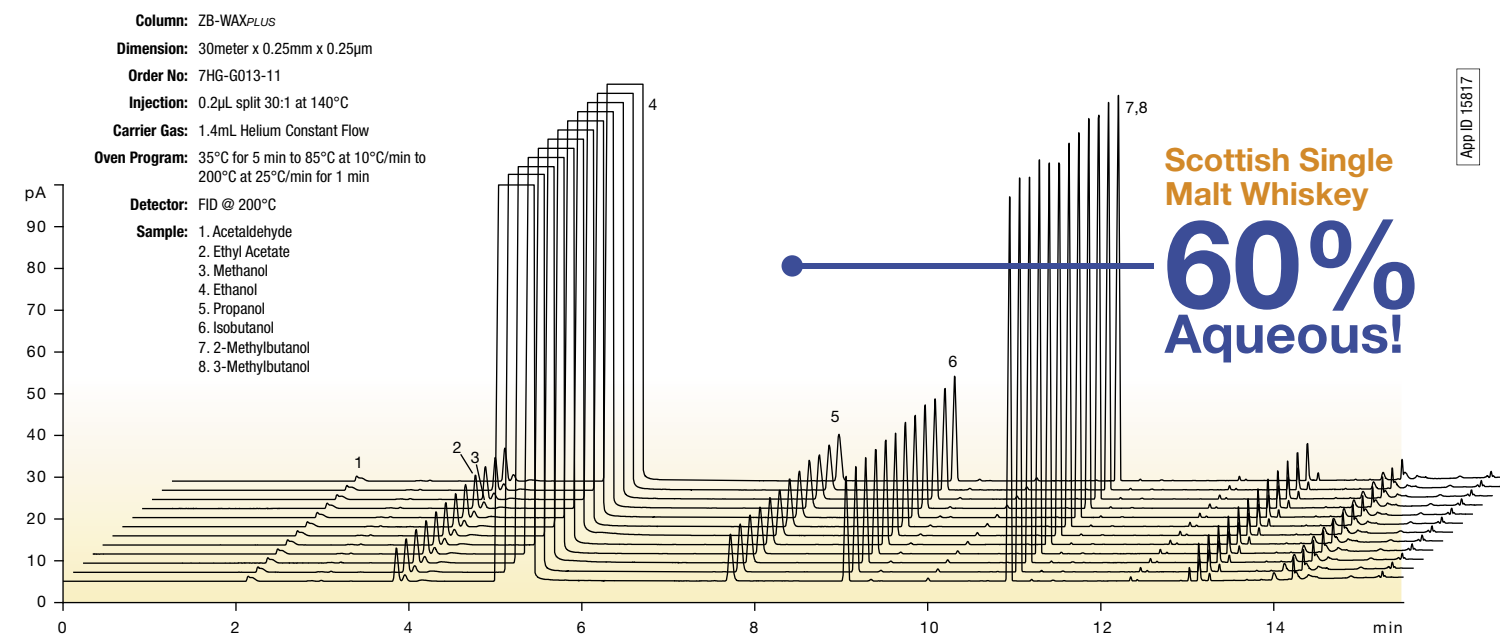
New Zebtron™  
**ZB-WAX<sup>PLUS</sup>**

# PLUS

## Enhanced Aqueous Stability

Wax columns provide optimal selectivity for many aqueous soluble compounds such as those found in alcoholic beverages or glycol samples. Historically, Polyethylene Glycol (PEG) phases have been unstable with aqueous

samples resulting in poor reproducibility and decreased lifetime. **The new ZB-WAX<sub>PLUS</sub> bonding procedure results in exceptional stability to repeated injections of aqueous matrices.**



# Zebtron ZB-WAX<sub>PLUS</sub>

- Enhanced Selectivity
- Reduced Activity
- Stable for Aqueous Samples
- Increased Efficiency at 20°C
- Fully Bonded and Solvent Rinsable
- Guaranteed Performance

ZB-WAX<sub>PLUS</sub> is the latest in an ever-increasing line of Zebtron GC columns produced with the needs of today's chromatographer in mind. Zebtron chemists are the foremost experts in the field of bonded phase technology. The new ZB-WAX<sub>PLUS</sub> was designed to provide two main benefits: increased selectivity and reduced activity. Additional testing has shown that these columns show unprecedented reproducibility and stability, which make them perfect for important methods. Try ZB-WAX<sub>PLUS</sub> and see how it will improve your GC analysis.

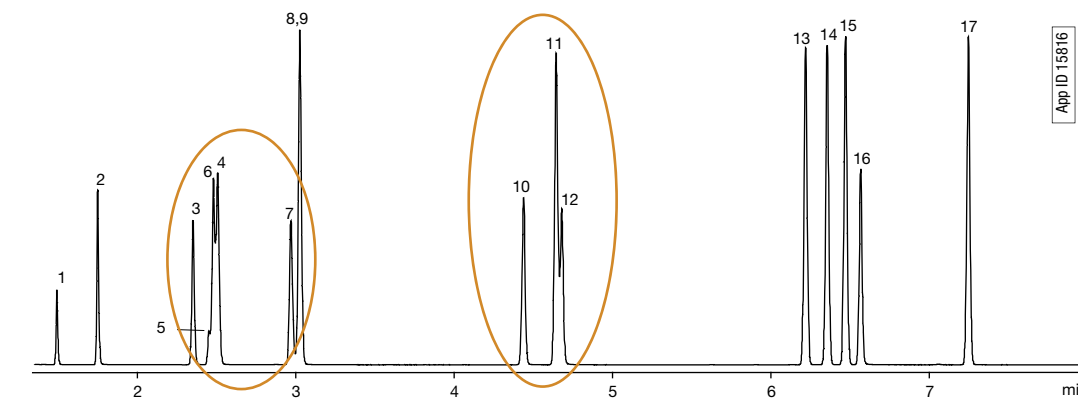
# PLUS

## Enhanced Resolution and Selectivity

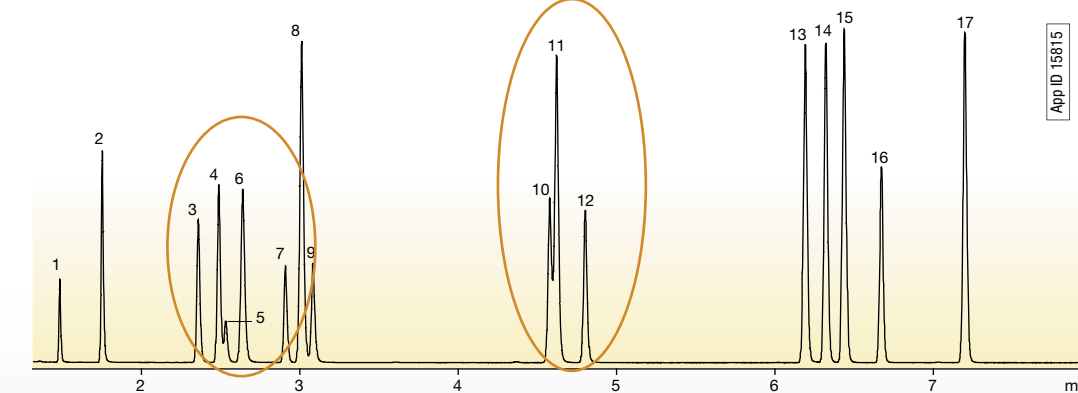
Resolution is the primary goal of all chromatography methods! The new ZB-WAX<sub>PLUS</sub> has the selectivity you

need to separate key compounds in your mix. **Other Wax products just cannot compete.\***

Restek® StabilWax®



Zebtron ZB-WAX<sub>PLUS</sub>



Conditions same for both columns:

**Dimension:** 30meter x 0.25mm x 0.25µm  
**Injection:** Split 100:1 @ 250°C, 1µL  
**Carrier Gas:** Constant Flow Hydrogen, 1.0mL/min  
**Oven Program:** 35°C for 2.5 min to 85°C at 10°C/min and hold until last peak elutes  
**Detector:** FID @ 225°C

**Sample:** 1. Methyl Formate, 2. Acetone, 3. Ethyl Acetate, 4. Methyl Ethyl Ketone, 5. Methanol, 6. 2-Methyl-2-propanol, 7. Methylene Chloride, 8. Benzene, 9. Ethanol, 10. 2-Butanol, 11. Toluene, 12. n-Propanol, 13. Ethyl Benzene, 14. p-Xylene, 15. m-Xylene, 16. 1-Butanol, 17. o-Xylene

\*All columns were new, never used, prior to this testing and purchased either directly from the original manufacturer or through an authorized distributor. All testing was carefully controlled to ensure conditions were similar for all columns involved. The comparative data is not representative of every application.

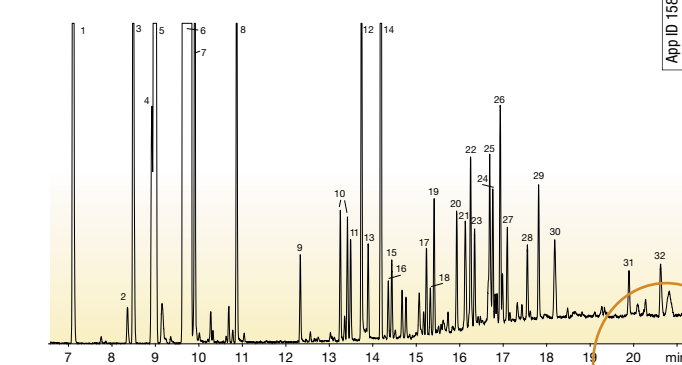
# PLUS

## Fast GC

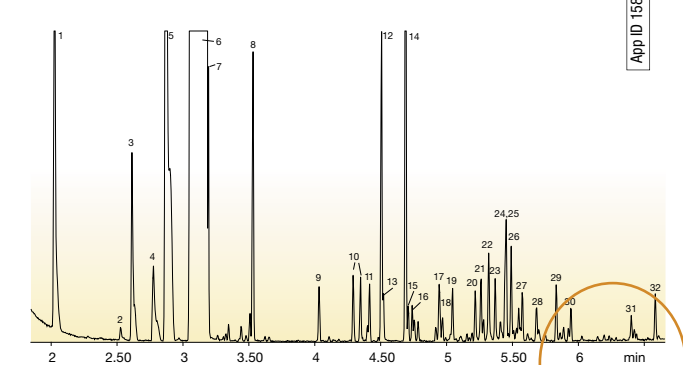
The latest advancement in GC is towards narrow bore columns such as 0.18 and 0.10mm. The stable bonding procedure for the ZB-WAX<sub>PLUS</sub> allows us to reproducibly bond these Fast GC columns. **This allows for easy transfer from current methods.**

- Enhanced Resolution
- Better Efficiency
- Faster Run Time
- More Throughput

Zebtron ZB-WAX<sub>PLUS</sub> 60 x 0.25 x 0.25



Zebtron ZB-WAX<sub>PLUS</sub> 10 x 0.10 x 0.10



**65% FASTER!**

**Column:** ZB-WAX<sub>PLUS</sub>  
**Dimension:** 60meter x 0.25mm x 0.25µm  
**Order No:** 7KG-G013-11  
**Injection:** Split 40:1 @ 220°C, 0.1µL  
**Carrier Gas:** Constant Flow Helium 1.2mL/min  
**Oven Program:** 40°C for 0.2 min to 210°C at 10°C/min for 10 min  
**Detector:** MSD 45-450 amu

**Sample (Same for both columns)**  
 1. α-Pinene, 2. β-Pinene, 3. Sabinene, 4. 3-Carene, 5. β-Myrcene, 6. Limonene, 7. β-Phellandrene, 8. Octanal, 9. Nonanal, 10. Eucalyptol, 11. Citronellal, 12. Decanal, 13. α-Cubebene, 14. Linalool, 15. β-Cubebene, 16. Octanol, 17. Germacrene, 18. Caryophyllene, 19. trans-p-Mentha-2,8-dienol, 20. cis-p-Mentha-2,8-dienol, 21. Geraniol, 22. α-Terpineol, 23. Dodecanal, 24. Valencene, 25. Citral, 26. Carvone, 27. Cadinen, 28. Perillaldehyde, 29. Trans-Carveol, 30. Cis-Carveol, 31. Perillol, 32. Octanoic acid

**Column:** ZB-WAX<sub>PLUS</sub>  
**Dimension:** 10meter x 0.10mm x 0.10µm  
**Order No:** 7CB-G013-02  
**Injection:** Split 20:1 @ 220°C, 0.2µL  
**Carrier Gas:** Constant Flow Helium 0.3mL/min  
**Oven Program:** 35°C for 1 min to 250°C at 30°C/min for 5 min  
**Detector:** MSD 45-450 amu

## BTEX Separation

p-Xylene Purity

**Column:** ZB-WAX<sub>PLUS</sub>  
**Dimension:** 30meter x 0.25mm x 0.25µm  
**Order No:** 7HG-G013-11  
**Injection:** 0.1µL; split 75:1 @ 220°C  
**Carrier Gas:** Constant Flow Helium @ 1.2mL/min  
**Oven Program:** 70°C for 6 min to 210°C at 25°C/min and hold for 4 min  
**Detector:** FID @ 250°C

**Sample:** 1. Toluene, 2. Ethylbenzene, 3. p-Xylene, 4. m-Xylene, 5. o-Xylene, 6. Methyl Benzaldehyde

