

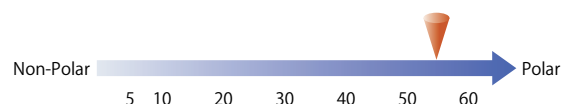
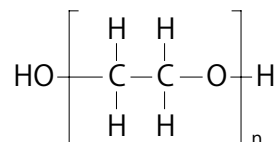
# InertCap™ Pure-WAX

- Polyethylene Glycol (PEG)
- USP Phase G16
- Polar
- Cross-Linked
- Equivalent : DB-WAX, HP-INNOWax, Rtx-Wax, Stabilwax

InertCap Pure-WAX is a strong polar column incorporating polyethylene glycol. Newly developed inner treatment technology, InertCap Pure-WAX realized the highest inertness among the market available columns. InertCap Pure-WAX is an optimal column for analyses of acidic compounds and/or basic compounds that existing WAX columns were not capable to analyze.

## 【 Comparison data 】

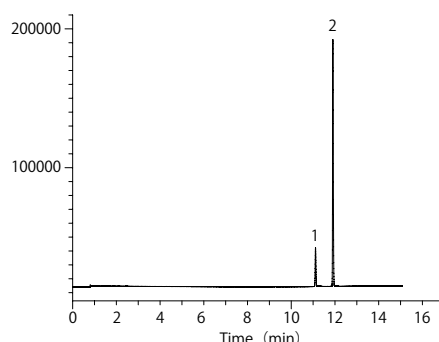
### Structure



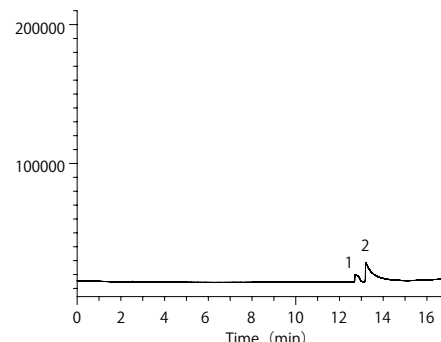
### ■ Acidic compounds

System : GC/FID  
 Column : 0.25 mm I.D. × 30 m df = 0.25 μm  
 Col.Temp. : 90 °C (5min hold) - 10 °C/min - 240 °C  
 Carrier Gas : He 100 kPa  
 Injection : Split flow 100 mL/min 240 °C  
 Detection : FID Range 10<sup>10</sup> 240 °C  
 Sample Size : 5 mg/mL 0.4 μL

1. Acrylic acid
2. Methacrylic acid



InertCap Pure-WAX

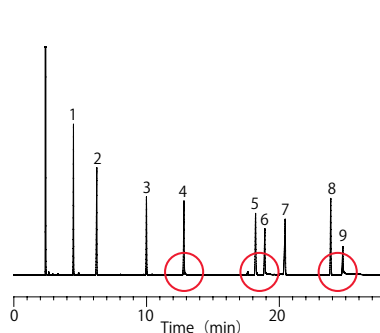


DB-WAX

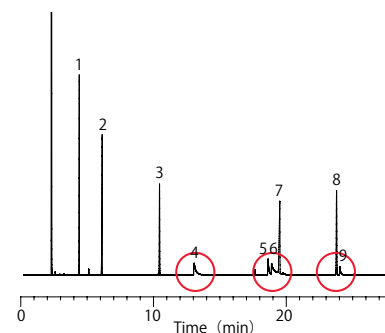
### ■ Basic compounds

System : GC/FID  
 Column : 0.25 mm I.D. × 30 m df = 0.25 μm  
 Col.Temp. : 60 °C - 4 °C/min - 250 °C  
 Injection : 250 °C  
 Detection : 250 °C  
 Sample Size : 0.1 mg/mL in methanol 0.2 μL

1. *n*-Undecane
2. *n*-Dodecane
3. 4,6-Dimethylpyrimidine
4. 1-Aminooctane
5. *N,N*-Dicyclohexylamine
6. 1-Aminododecane
7. *n*-Heptadecane
8. 2,6-Dimethylaniline
9. 1-Aminododecane



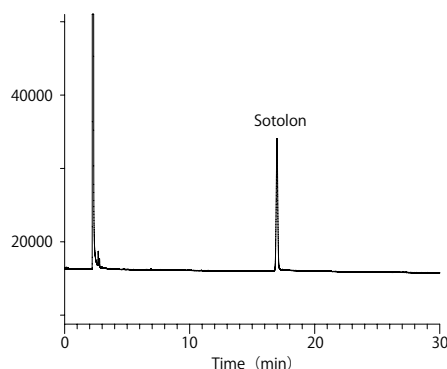
InertCap Pure-WAX



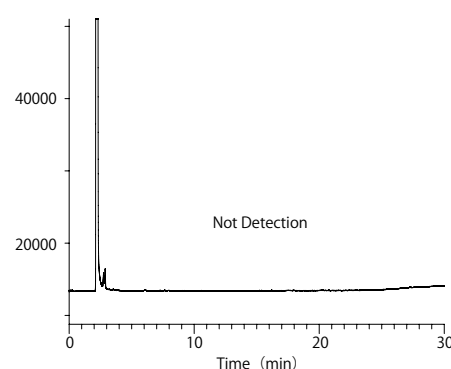
DB-WAX

### ■ Metal coordination compounds

System : GC/FID  
 Column : 0.25 mm I.D. × 30 m df = 0.25 μm  
 Col.Temp. : 160 °C Isothermal  
 Carrier Gas : He 100 kPa  
 Injection : Split flow 50 mL/min 240 °C  
 Detection : FID Range 10<sup>10</sup> 240 °C  
 Sample Size : 1 mg/mL in Ethanol  
 1 μL



InertCap Pure-WAX

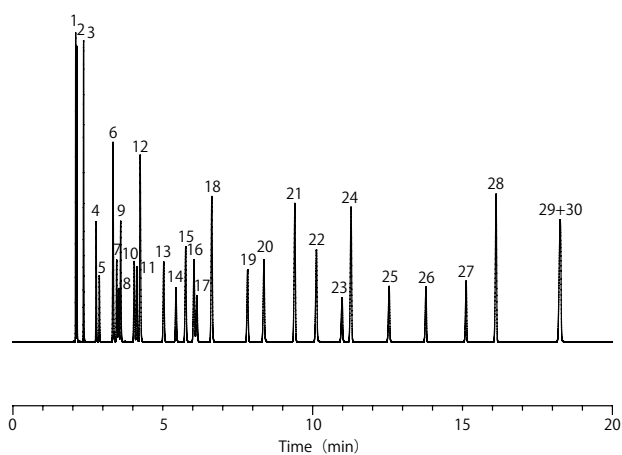


DB-WAX

## Solvents

System : GC/FID  
 Column : InertCap Pure-WAX  
 0.25 mm I.D. × 30 m df = 0.25 μm  
 Col. Temp. : 40 °C (5 min hold) – 5 °C/min – 200 °C  
 Carrier Gas : He 100 kPa  
 Injection : Split 1:80 250 °C  
 Detection : FID Range 10<sup>^0</sup> 260 °C  
 Sample Size : 0.1 μL

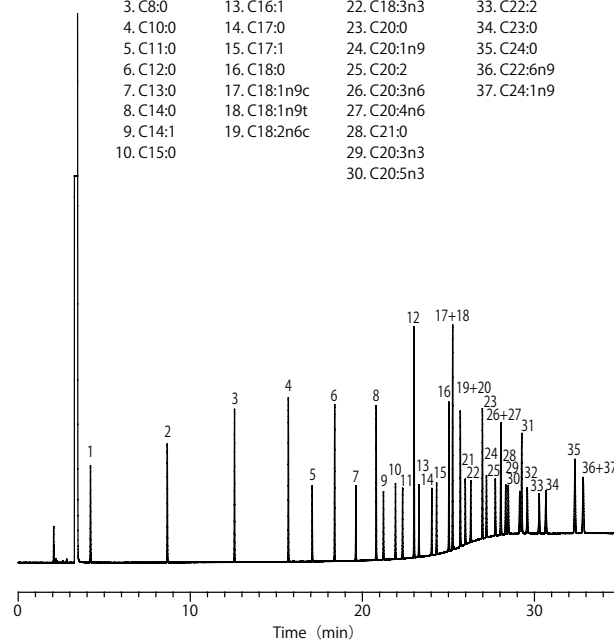
- |                        |                             |                              |
|------------------------|-----------------------------|------------------------------|
| 1. Hexane              | 11. iso-Propanol            | 21. Ethylbenzene             |
| 2. Cyclopentane        | 12. Benzene                 | 22. n-Butanol                |
| 3. Cyclohexane         | 13. n-Propylacetate         | 23. Methylcellosolve         |
| 4. Acetone             | 14. Trichloroethylene       | 24. o-Xylene                 |
| 5. Methylacetate       | 15. Methyl iso-butyl ketone | 25. Ethylcellosolve          |
| 6. Cycloheptane        | 16. iso-Butylacetate        | 26. Methylcellosolve acetate |
| 7. Ethylacetate        | 17. Tetrachloroethylene     | 27. Ethylcellosolve acetate  |
| 8. Methanol            | 18. Toluene                 | 28. α-Methylstyrene          |
| 9. Methyl ethyl ketone | 19. n-Butylacetate          | 29. n-Butylcellosolve        |
| 10. Ethanol            | 20. iso-Butanol             | 30. Cyclohexanol             |



## Fatty acid methylester

System : GC/FID  
 Column : InertCap Pure-WAX  
 0.25 mm I.D. × 30 m df = 0.25 μm  
 Col. Temp. : 50 °C (5 min hold) – 5 °C/min – 260 °C (30 min hold)  
 Carrier Gas : He 100 kPa  
 Injection : Split 1:80 250 °C  
 Detection : FID Range 10<sup>^0</sup> 260 °C  
 Sample Size : 0.1 μL

- |           |              |              |             |
|-----------|--------------|--------------|-------------|
| 1. C4:0   | 11. C15:1    | 20. C18:2n6t | 31. C22:0   |
| 2. C6:0   | 12. C16:0    | 21. C18:3n6  | 32. C22:1n9 |
| 3. C8:0   | 13. C16:1    | 22. C18:3n3  | 33. C22:2   |
| 4. C10:0  | 14. C17:0    | 23. C20:0    | 34. C23:0   |
| 5. C11:0  | 15. C17:1    | 24. C20:1n9  | 35. C24:0   |
| 6. C12:0  | 16. C18:0    | 25. C20:2    | 36. C22:6n9 |
| 7. C13:0  | 17. C18:1n9c | 26. C20:3n6  | 37. C24:1n9 |
| 8. C14:0  | 18. C18:1n9t | 27. C20:4n6  |             |
| 9. C14:1  | 19. C18:2n6c | 28. C21:0    |             |
| 10. C15:0 |              | 29. C20:3n3  |             |
|           |              | 30. C20:5n3  |             |



## 【InertCap™ Pure-WAX】

ID (mm)	Length (m)	Thickness (μm)	Max. Temperature (°C)	Cat.No.
0.25	30	0.25	iso.260-prog.260	1010-68142
		0.50		1010-68144
	60	0.25	iso.260-prog.260	1010-68162
		0.50		1010-68164
0.32	30	0.25	iso.260-prog.260	1010-68242
		0.50		1010-68244
	60	0.25	iso.260-prog.260	1010-68262
		0.50		1010-68264
0.53	15	1.00	iso.240-prog.240	1010-68425
	30	1.00	iso.240-prog.240	1010-68445
	60	1.00	iso.240-prog.240	1010-68465

## 【InertCap™ Pure-WAX ProGuard (Built-in Guard Column)】

ID (mm)	Length (m)	Thickness (μm)	Guard Column (m)	Max. Temperature (°C)	Cat.No.
0.25	30	0.25	2	iso.260-prog.260	1010-68490
			5		1010-68491
			10		1010-68494

## 【InertCap™ Pure-WAX T.L. (Built-in Transfer Line)】

ID (mm)	Length (m)	Thickness (μm)	Transfer Line (m)	Max. Temperature (°C)	Cat.No.
0.25	30	0.25	2	iso.260-prog.260	1010-68492
	60	0.25	2	iso.260-prog.260	1010-68493

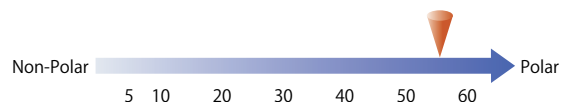
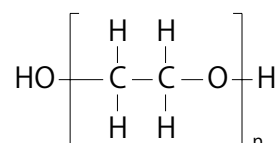
※ See page 32 for more information about ProGuard and T.L.

# InertCap™ WAX

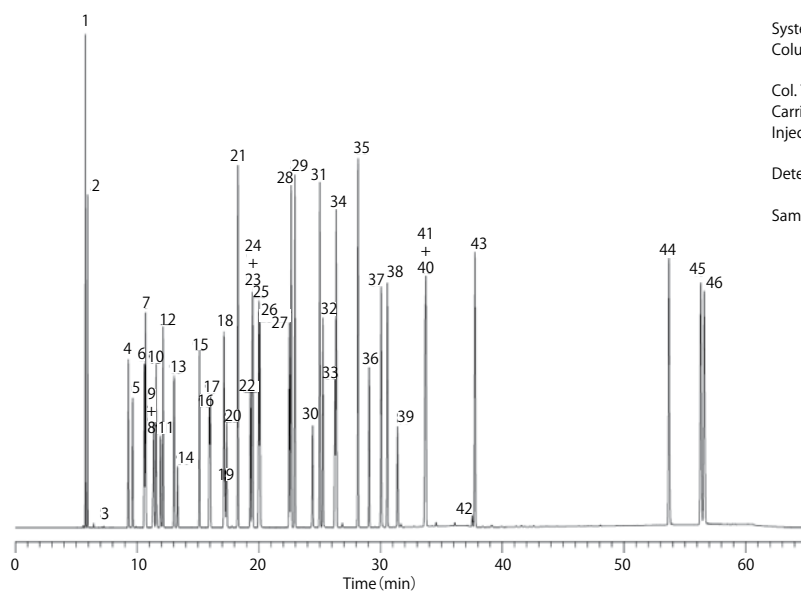
- Polyethylene Glycol (PEG)
- USP Phase G16
- Polar
- Cross-Linked
- Equivalent : DB-WAX, HP-INNOWax, Rtx-Wax, Stabilwax

InertCap WAX is a strong polar column incorporating polyethylene glycol. With a slightly stronger polarity than InertCap Pure-WAX, InertCap WAX demonstrates a high separation. It is optimal for analyses of strong polar samples such as solvent.

## Structure



## Solvents



System : GC/FID  
 Column : InertCap WAX  
 0.25 mm I.D. × 60 m df = 0.25 μm  
 Col. Temp. : 40 °C (5 min hold) - 4 °C/min - 230 °C (5 min hold)  
 Carrier Gas : He 130 kPa  
 Injection : Split flow 100 mL/min  
 250 °C  
 Detection : FID Range 10<sup>^1</sup>  
 250 °C  
 Sample Size : 1.0 μL

- |                                       |                                      |                                    |                                    |                               |
|---------------------------------------|--------------------------------------|------------------------------------|------------------------------------|-------------------------------|
| 1. <i>n</i> -Hexane                   | 11. Methanol                         | 21. Toluene                        | 31. <i>o</i> -Xylene               | 41. Cyclohexanol              |
| 2. Ethyl ether                        | 12. Methyl ethyl ketone              | 22. 1,4-Dioxane                    | 32. <i>i</i> -Amyl alcohol         | 42. 1,1,2,2-Tetrachloroethane |
| 3. Carbon disulfide                   | 13. <i>i</i> -Propanol               | 23. <i>n</i> -Butyl acetate        | 33. Ethyl cellosolve               | 43. <i>o</i> -Dichlorobenzene |
| 4. Acetone                            | 14. Dichloromethane                  | 24. 1,2-Dichloroethane             | 34. Chlorobenzene                  | 44. <i>o</i> -Cresol          |
| 5. Methyl acetate                     | 15. <i>n</i> -Propyl acetate         | 25. Methyl- <i>n</i> -butyl ketone | 35. Styrene                        | 45. <i>p</i> -Cresol          |
| 6. <i>trans</i> -1,2-Dichloroethylene | 16. <i>cis</i> -1,2-Dichloroethylene | 26. <i>i</i> -Butanol              | 36. Cellosolve acetate             | 46. <i>m</i> -Cresol          |
| 7. Tetrahydrofuran                    | 17. Trichloroethylene                | 27. <i>n</i> -Butanol              | 37. Cyclohexanone                  |                               |
| 8. Carbon tetrachloride               | 18. 2-Butanol                        | 28. <i>p</i> -Xylene               | 38. 1-Methylcyclohexanol           |                               |
| 9. 1,1,1-Trichloroethane              | 19. Chloroform                       | 29. <i>m</i> -Xylene               | 39. <i>N,N</i> -Dimethyl formamide |                               |
| 10. Ethyl acetate                     | 20. Tetrachloroethylene              | 30. Methyl cellosolve              | 40. Butyl cellosolve               |                               |

## 【InertCap™ WAX】

ID (mm)	Length (m)	Thickness (μm)	Max. Temperature (°C)	Cat.No.
0.25	15	0.25	iso.250-prog.260	1010-67122
		0.25	iso.250-prog.260	1010-67142
		0.50		1010-67144
	60	0.25	iso.250-prog.260	1010-67162
		0.25		1010-67164
		0.50		1010-67164

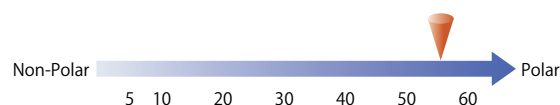
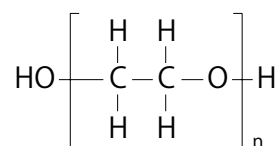
ID (mm)	Length (m)	Thickness (μm)	Max. Temperature (°C)	Cat.No.
0.32	15	0.25	iso.250-prog.260	1010-67222
		0.25	iso.250-prog.260	1010-67242
		0.50		1010-67244
	60	0.25	iso.250-prog.260	1010-67262
		0.25		1010-67264
		0.50		1010-67264
0.53	15	1.00	iso.230-prog.240	1010-67425
		2.00		1010-67427
	30	1.00	iso.230-prog.240	1010-67445
		2.00		1010-67447
		3.00		1010-67449
	60	1.00	iso.230-prog.240	1010-67465

# InertCap™ WAX-HT

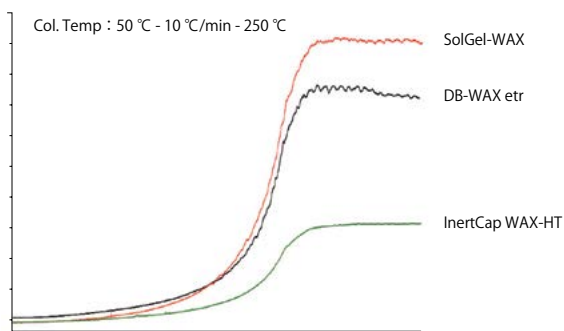
- Polyethylene Glycol (PEG)
- USP Phase G16
- Polar
- Cross-Linked
- Equivalent : DB-WAXetr, SolGel-WAX

InertCap WAX-HT is a strong polar column incorporating polyethylene glycol. By increasing the heat resistance of liquid phase, InertCap WAX-HT realized the maximum temperature 280 °C. Being optimal for the analyses of polar samples such as solvents, InertCap WAX-HT can also fit for the analyses of high-boiling compounds.

## Structure

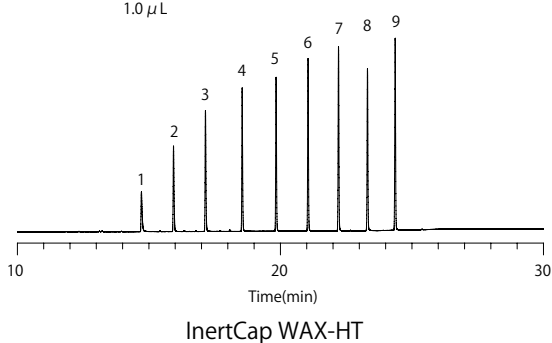


## Comparison of column bleed

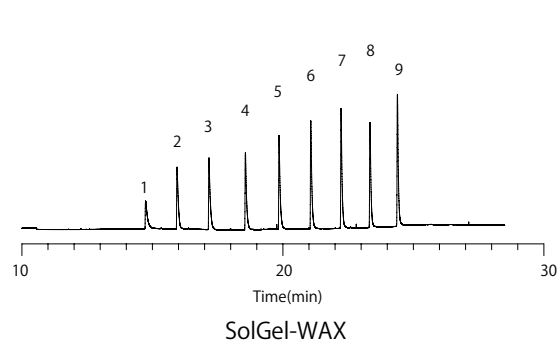


## Short-chain fatty acid

System : GC/FID  
 Column : InertCap WAX-HT 0.25 mm I.D. × 30 m df = 0.25 μm  
 Col. Temp. : 40 °C (5 min hold) - 10 °C/min - 240 °C  
 Carrier Gas : He 100 kPa  
 Injection : Split flow 50 mL/min 240 °C  
 Detection : FID Range 10<sup>10</sup> 240 °C  
 Sample Size : 1000 μg/mL in Acetone  
 1.0 μL



1. Acetic Acid 6. Heptyric Acid  
 2. Propionic Acid 7. Caprylic Acid  
 3. Butyric Acid 8. Pelargonic Acid  
 4. Valeric Acid 9. Capric Acid  
 5. Caproic Acid



## 【InertCap™ WAX-HT】

ID (mm)	Length (m)	Thickness (μm)	Max. Temperature (°C)	Cat.No.
0.25	30	0.25	iso.270-prog.280	1010-68542
		0.50	iso.260-prog.270	1010-68544
	60	0.25	iso.270-prog.280	1010-68562
		0.50	iso.260-prog.270	1010-68564

ID (mm)	Length (m)	Thickness (μm)	Max. Temperature (°C)	Cat.No.
0.32	30	0.25	iso.270-prog.280	1010-68642
		0.50	iso.260-prog.270	1010-68644
	60	0.25	iso.270-prog.280	1010-68662
		0.50	iso.260-prog.270	1010-68664
0.53	15	1.00	iso.250-prog.260	1010-68725
	30	1.00	iso.250-prog.260	1010-68745
	60	1.00	iso.250-prog.260	1010-68765