

VertiBond™ 5 Capillary Columns

- 5% Phenyl, 95% Dimethylpolysiloxane
- Intermediate polar stationary phase
- High temperature range
- High efficiency, high inertness columns

VertiBond™ 5 column contains 5% Phenyl and 95% Dimethylpolysiloxane stationary phase. VertiBond™ 5 has a slightly higher polarity than VertiBond™ 1, results in better selectivity for aromatic compounds, acidic and basic compounds and is generally the best choice when developing a method.



VertiBond™ 5 Capillary Columns					
Length (m)	I.D. (mm)	Film (µm)	Temp. Limits (°C)	Part No.	
10	0.25	0.20	360/370	0402-2040	
		0.32	360/370	0402-3060	
		0.53	360/370	0402-5050	
		1.20	340/360	0402-5120	
		2.65	340/360	0402-5180	
15	0.25	5.00	340/360	0402-5210	
		0.10	360/370	0402-2001	
		0.20	360/370	0402-2041	
		0.25	360/370	0402-2051	
		0.50	360/370	0402-2091	
	0.32	1.00	340/360	0402-2111	
		0.10	360/370	0402-3001	
		0.25	360/370	0402-3051	
		0.30	360/370	0402-3061	
		0.50	360/370	0402-3091	
0.45	0.42	1.00	340/360	0402-3111	
		1.50	340/360	0402-3151	
		1.27	300/320	0402-4131	
		0.53	0.10	360/370	0402-5001
		0.25	360/370	0402-5051	
0.53	0.50	0.50	360/370	0402-5091	
		1.00	340/360	0402-5111	
		1.20	340/360	0402-5121	
		1.50	340/360	0402-5151	
		3.00	340/360	0402-5191	
5.00	340/360	0402-5211			

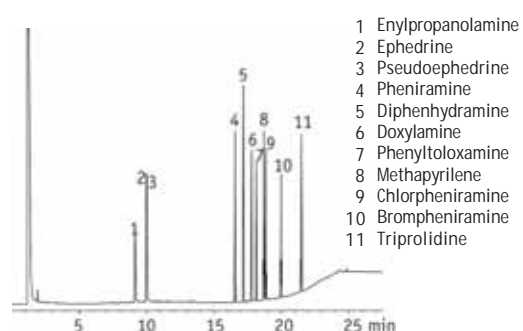
VertiBond™ 5 Specifications

Phase:	5% Phenyl, 95% Dimethylpolysiloxane
Polarity:	Intermediate polar
USP Designation:	G27, G36
Ideal for:	General Applications

VertiBond™ 5 is equivalent phase

Restek	Rtx-5, RTX-XTI
Agilent	HP-5, ULTRA-2, DB-5
Supelco	SPB-5, Equity-5, PTE-5
Alltech	AT-5
SGE	BP-5
Varian	CP-SIL8CB
Ohio Valley	OV-5

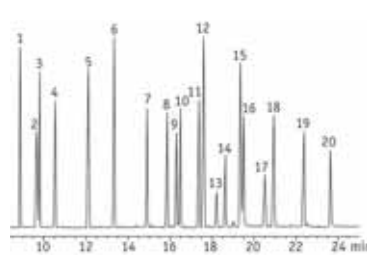
Underivatized Antihistamines (Basic Drugs)



Column: VertiBond™ 5, 30m x 0.32mm, 1.0µm
 Part No.: 0402-3113
 Temp: 130°C (hold 5 min.), 305°C
 Injector: 1.0µL split injection
 Detector: FID
 Carrier Gas: Hydrogen

VertiBond™ 5 Capillary Columns						
Length (m)	I.D. (mm)	Film (µm)	Temp. Limits (°C)	Part No.		
25	0.25	0.20	360/370	0402-2042		
		0.32	360/370	0402-3062		
		0.53	340/360	0402-5112		
30	0.25	0.10	360/370	0402-2003		
		0.25	360/370	0402-2053		
		0.50	360/370	0402-2093		
		1.00	340/360	0402-2113		
		0.32	360/370	0402-3003		
		0.25	360/370	0402-3053		
		0.30	360/370	0402-3063		
		0.50	360/370	0402-3093		
		1.00	340/360	0402-3113		
		1.50	340/360	0402-3153		
30	0.32	0.10	360/370	0402-3003		
		0.25	360/370	0402-3053		
		0.30	360/370	0402-3063		
		0.50	360/370	0402-3093		
		1.00	340/360	0402-3113		
		1.50	340/360	0402-3153		
		2.65	340/360	0402-5183		
		3.00	340/360	0402-5193		
		5.00	340/360	0402-5213		
		50	0.25	0.10	360/370	0402-2004
0.20	360/370			0402-2044		
0.25	360/370			0402-2054		
0.32	360/370			0402-3064		
0.53	340/360			0402-5114		
1.20	340/360			0402-5124		
60	0.25			0.10	360/370	0402-2005
				0.20	360/370	0402-2045
				0.25	360/370	0402-2055
				0.50	360/370	0402-2095
		1.00	340/360	0402-2115		
		0.32	360/370	0402-3005		
		0.25	360/370	0402-3055		
		0.30	360/370	0402-3065		
		0.50	360/370	0402-3095		
		1.00	340/360	0402-3115		
1.50	340/360	0402-3155				

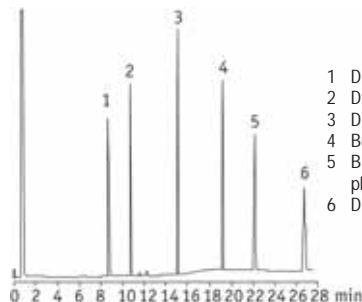
CLP Pesticides



- 1 α-BHC
- 2 β-BHC
- 3 γ-BHC
- 4 δ-BHC
- 5 Heptachlor
- 6 Aldrin
- 7 Heptachlor epoxide
- 8 γ-Chlordane
- 9 Endosulfan I
- 10 α-Chlordane
- 11 Dieldrin
- 12 p,p'-DDE
- 13 Endrin
- 14 Endosulfan II
- 15 p,p'-DDT
- 16 Endrin aldehyde
- 17 Endosulfan sulfate
- 18 p,p'-DDT
- 19 Endrin ketone
- 20 Methoxychlor

Column: VertiBond™ 5, 15m x 0.32mm, 0.25µm
 Part No.: 0402-3051
 Temp: 50°C (hold 1 min), 50-150°C at 25°/min, 150-230°C at 4°/min
 Injector: Splitless at 250°C
 Detector: FID at 300°C
 Carrier Gas: Helium at 37.2cm/sec

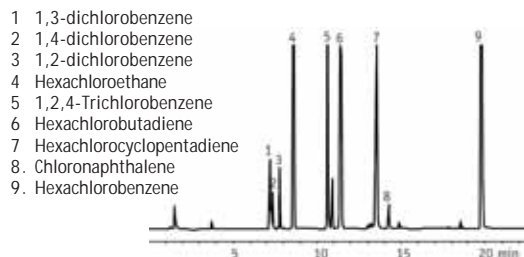
EPA Method 606-Phthalates



- 1 Dimethylphthalate
- 2 Diethylphthalate
- 3 Di-n-butylphthalate
- 4 Butylbenzyl Phthalate
- 5 Bis(2-ethylhexyl) phthalate
- 6 Di-n-octylphthalate

Column: VertiBond™ 5, 15m x 0.53mm, 1.0µm
 Part No.: 0402-5111
 Temp: 115°C (4 min hold), 115°C-250°C at 10°C/min, 250°C (11 min hold)
 Injector: Split at 250°C (5:1 split ratio w/ split flow of 17 mL/min)
 Detector: FID at 275°C
 Carrier Gas: Helium at 35cm/sec

Chlorinated Hydrocarbons US EPA Method 612

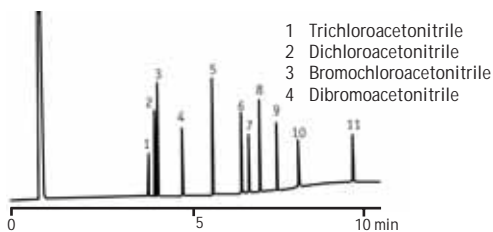


- 1 1,3-dichlorobenzene
- 2 1,4-dichlorobenzene
- 3 1,2-dichlorobenzene
- 4 Hexachloroethane
- 5 1,2,4-Trichlorobenzene
- 6 Hexachlorobutadiene
- 7 Hexachlorocyclopentadiene
- 8 Chloronaphthalene
- 9 Hexachlorobenzene

Column: VertiBond™ 5, 30m x 0.53mm, 0.50µm
 Part No.: 0402-5093
 Temp: 40°C to 250°C at 8°/min (5 min hold)
 Injector: 1.0µL direct injection at 250°C/300°C
 Detector: FID
 Carrier Gas: Helium at 35cm/sec

VertiBond™ 5 Capillary Columns						
Length (m)	I.D. (mm)	Film (µm)	Temp. Limits (°C)	Part No.		
60	0.53	0.10	360/370	0402-5005		
		0.25	360/370	0402-5055		
		0.50	360/370	0402-5095		
		1.00	340/360	0402-5115		
		1.20	340/360	0402-5125		
		1.50	340/360	0402-5155		
		3.00	340/360	0402-5195		
		5.00	340/360	0402-5215		
		105	0.25	0.10	360/370	0402-2007
				0.25	360/370	0402-2057
0.50	360/370			0402-2097		
1.00	340/360			0402-2117		
0.32	360/370			0402-3007		
0.25	360/370			0402-3057		
0.50	360/370			0402-3097		
1.00	340/360			0402-3117		
1.50	340/360			0402-3157		
0.53	1.20			340/360	0402-5127	
	5.00	340/360	0402-5217			

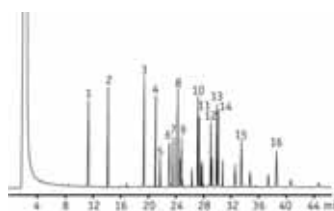
Narcotics and Adulterants



1 Trichloroacetoneitrile
 2 Dichloroacetoneitrile
 3 Bromochloroacetoneitrile
 4 Dibromoacetoneitrile

Column: VertiBond™ 5, 30m x 0.32mm, 0.25µm
 Part No.: 0402-3053
 Temp: 55°C (2 min hold) to 75°C at 5°C/min
 Detector: NPD
 Carrier Gas: Helium at 2.2mL/min

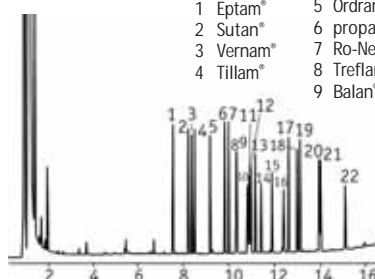
EPA Method 8060 Phthalate Esters



Column: VertiBond™ 5, 30m x 0.53mm, 0.50µm
 Part No.: 0402-5093
 Temp: 60°C to 290°C (1 min hold)
 Injector: 0.5µL direct injection at 290°
 Detector: FID
 Carrier gas: Helium at 20cm/sec

- 1 dimethyl phthalate
- 2 diethyl phthalate
- 3 diisobutyl phthalate
- 4 di-*n*-butyl phthalate.
- 5 bis(methoxyethyl) phthalate
- 6 bis(4-methyl,2-pentyl) phthalate
- 7 bis(ethoxyethyl) phthalate
- 8 di-*n*-amyl phthalate
- 9 hexyl-2-ethylhexyl phthalate
- 10 di-*n*-hexyl phthalate
- 11 butylbenzyl phthalate
- 12 bis(2-*n*-butoxyethyl) phthalate
- 13 dicyclohexyl phthalate
- 14 bis(2-ethylhexyl) phthalate
- 15 di-*n*-octyl phthalate
- 16 di-nonyl phthalate

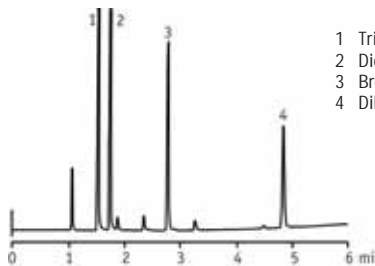
Nitrogen-Containing Herbicides



Column: VertiBond™ 5, 30m x 0.53mm, 0.50µm
 Part No.: 0402-5093
 Temp: 60°C (1 min hold) to 290°C at 15°C/min (hold 5min)
 Injector: 2.0µL direct injection at 290° concentration approximately 10ng per component
 Detector: FID
 Carrier gas: Helium at 40cm/sec

- | | | |
|-----------|--------------|---------------|
| 1 Eptam® | 5 Ordram® | 10 simazine |
| 2 Sutan® | 6 propachlor | 11 atrazine |
| 3 Vernam® | 7 Ro-Neet® | 12 propazine |
| 4 Tillam® | 8 Treflan® | 13 Tolban® |
| | 9 Balan® | 14 terbacil |
| | | 15 Sencor® |
| | | 16 bromacil |
| | | 17 Dual® |
| | | 18 Parflan® |
| | | 19 Prowl® |
| | | 20 oxadiazon |
| | | 21 Goal® |
| | | 22 hexazinone |

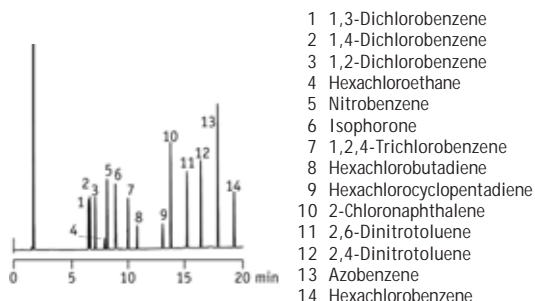
EPA Method 551: Chlorinated Disinfection



Column: VertiBond™ 5, 30m x 0.32mm, 0.25µm
 Part No.: 0402-3053
 Temp: 55°C (2 min hold) to 75°C at 5°C/min
 Detector: NPD
 Carrier Gas: Helium at 2.2mL/min

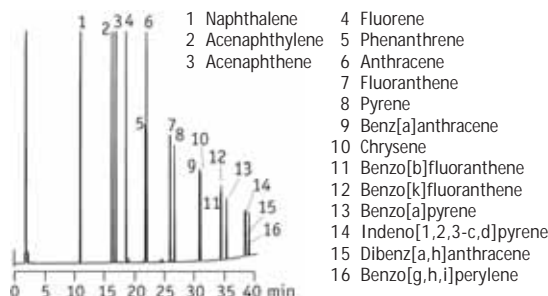
- 1 Trichloroacetoneitrile
- 2 Dichloroacetoneitrile
- 3 Bromochloroacetoneitrile
- 4 Dibromoacetoneitrile

Best/Neutral Mix



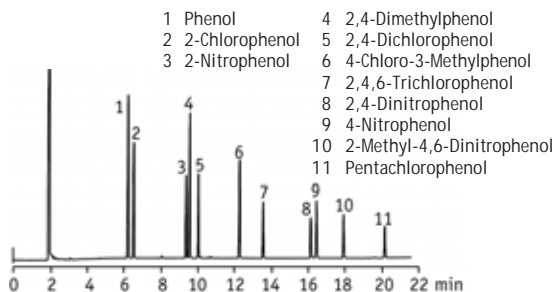
Column: VertiBond™ 5, 30m x 0.32mm, 0.25µm
 Part No.: 0402-3053
 Temp: 60°C (2 min hold) to 205°C at 8°C/min
 Detector: FID
 Carrier Gas: Helium at 2.2mL/min

Polynuclear Aromatic Hydrocarbons



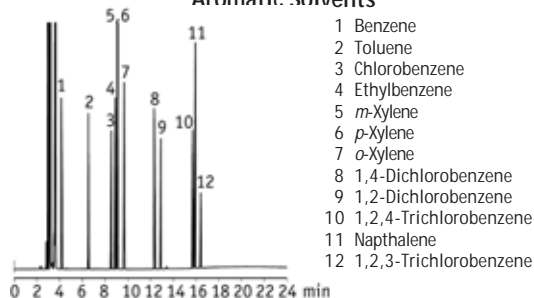
Column: VertiBond™ 5, 30m x 0.32mm, 0.25µm
 Part No.: 0402-3053
 Temp: 60°C (2 min hold) to 315°C at 8°C/min
 Detector: FID
 Carrier Gas: Helium at 1.6mL/min

Phehols



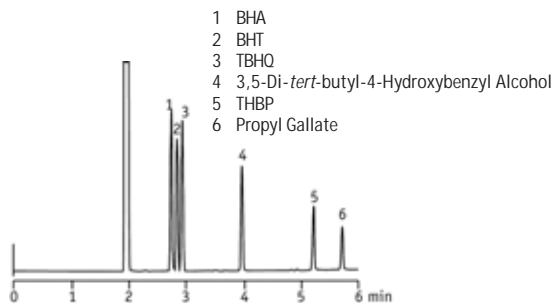
Column: VertiBond™ 5, 30m x 0.25mm, 0.25µm
 Part No.: 0402-2053
 Temp: 70°C (2 min hold) to 230°C at 8°C/min
 Detector: FID
 Carrier Gas: Helium at 0.8mL/min

Aromatic Solvents



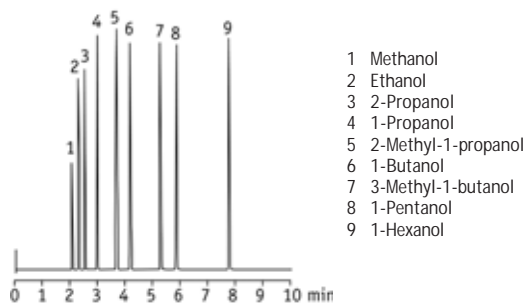
Column: VertiBond™ 5, 30m x 0.32mm, 1.00µm
 Part No.: 0402-3113
 Temp: 60°C (4 min hold) to 200°C at 10°C/min
 Detector: FID
 Carrier Gas: Helium at 1.3mL/min (24cm/sec)

Phenolic Antioxidants



Column: VertiBond™ 5, 30m x 0.25 mm, 0.25µm
 Part No.: 0402-2053
 Temp: 220°C (3min hold) to 265°C at 15°C/min
 Detector: FID
 Carrier Gas: Helium at 0.74mL/min

C1-C6 Alcohols



Column: VertiBond™ 5, 30m x 0.32mm, 1.00µm
 Part No.: 0402-3113
 Temp: 40°C to 120°C at 10°C/min
 Detector: FID at 275°C
 Carrier Gas: Helium at 1.2mL/min (25cm/sec)