VertiBond™ 1 Capillary Columns

- **100% Dimethylpolysiloxane**
- **Non-polar stationary phase**
- **Excellent general purpose columns**
- **High temperature range**
- **High efficiency, high inertness columns**

VertiBond™ 1 column contains 100% Dimethylpolysiloxane stationary phase. This is the most popular non-polar stationary phase in use. Separation is almost entirely based on boiling points, making the columns suitable for a wide range of applications with a broad temperature range.

VertiBond™ 1 Specifications	
Phase:	100% Dimethylpolysiloxane
Polarity:	Non-polar
USP Designation:	G1, G2, G38
Ideal for:	General Purpose

VertiBond™ 1 Equivalent phases	
Restek	Rtx-1
Agilent	HP-1, HP-101, ULTRA-1, DB-1, DB-2887
Supelco	SPB-1, Equity-1, SPB-Sulfur
Alltech	AT-1
SGE	BP-1
Varian	CP-Sil 5CB
Ohio Valley	OV-1
Phenomenex	ZB-1

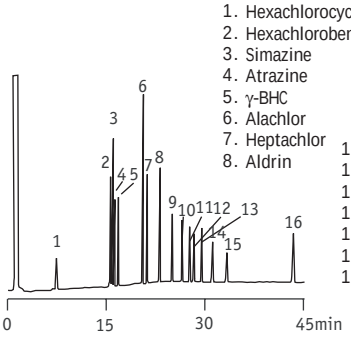
Ordering Information

Length (m)	I.D. (mm)	Film (µm)	Temp. (°C)	Part No.
10	0.25	0.10	360/370	0400-2000
		0.20	360/370	0400-2040
		0.25	360/370	0400-2050
	0.32	0.10	360/370	0400-3000
		0.25	360/370	0400-3050
		0.30	360/370	0400-3060
	0.53	0.25	360/370	0400-5050
		1.20	340/360	0400-5120
		2.65	340/360	0400-5180
		5.00	340/360	0400-5210
15	0.25	0.10	360/370	0400-2001
		0.20	360/370	0400-2041
		0.25	360/370	0400-2051
		0.50	360/370	0400-2091
		1.00	340/360	0400-2111
	0.32	0.10	360/370	0400-3001
		0.25	360/370	0400-3051
		0.30	360/370	0400-3061
		0.50	360/370	0400-3091
		1.00	340/360	0400-3111
		1.50	320/340	0400-3151
		3.00	310/330	0400-3191
		5.00	260/280	0400-3211
	0.45	0.13	340/360	0400-4011
		0.42	300/320	0400-4071
		1.00	350/350	0400-4111
		1.27	300/320	0400-4131
		2.55	270/290	0400-4171
		4.25	270/290	0400-4201

Ordering Information

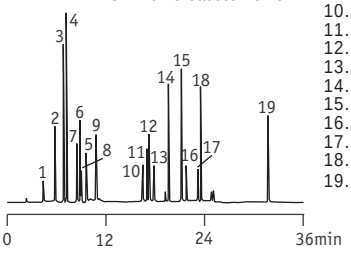
Length (m)	I.D. (mm)	Film (µm)	Temp. (°C)	Part No.
15	0.53	0.10	360/370	0400-5001
		0.15	360/370	0400-5021
		0.25	360/370	0400-5051
		0.50	360/370	0400-5091
		1.00	340/360	0400-5111
		1.20	340/360	0400-5121
		1.50	340/360	0400-5151
		2.65	340/360	0400-5181
		3.00	340/360	0400-5191
		5.00	340/360	0400-5211
25	0.25	0.20	360/370	0400-2042
	0.32	0.30	360/370	0400-3062
		0.50	360/370	0400-3092
	0.53	1.20	340/360	0400-5122
30	0.25	0.10	360/370	0400-2003
		0.20	360/370	0400-2043
		0.25	360/370	0400-2053
		0.50	360/370	0400-2093
		1.00	360/370	0400-2113
	0.32	0.10	360/370	0400-3003
		0.25	360/370	0400-3053
		0.30	360/370	0400-3063
		0.50	360/370	0400-3093
		1.00	340/360	0400-3113
		1.50	320/340	0400-3153
		3.00	310/330	0400-3193
		5.00	260/280	0400-3213
	0.45	0.42	300/320	0400-4073
		1.00	350/350	0400-4113
		1.27	300/320	0400-4133
		2.55	270/290	0400-4173
		4.25	270/290	0400-4203
	0.53	0.10	360/370	0400-5003
		0.25	360/370	0400-5053
		0.50	360/370	0400-5093
		1.00	340/360	0400-5113
		1.20	340/360	0400-5123
		1.50	340/360	0400-5153
		2.65	340/360	0400-5183
		3.00	340/360	0400-5193
		5.00	340/360	0400-5213
50	0.25	0.20	360/370	0400-2044
	0.32	0.30	360/370	0400-3064
	0.53	1.20	340/360	0400-5124
		5.00	340/360	0400-5214

EPA 505 Organohalide pesticides



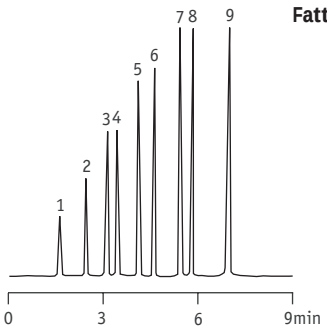
Column: VertiBond™ 1, 30m x 0.32mm, 5.0µm
Temp: 150-240°C 4 °C/min, 240°C (hold 30min)
Injector: Splitless at 200°C
Detector: FID
Carrier gas: Helium 25cm/sec at 150°C

EPA Method 551



Column: VertiBond™ 1, 30 m x 0.25 mm, 1.0µm
Temp: 35°C for 9 min, 35-40°C at 10°/min, 40°C for 3 min, 40-150°C at 6°/min, 150°C for 1min
Injector: Splitless at 200°C
Detector: ECD 300°C
Carrier gas: Helium 24.8cm/sec at 150°C

Fatty Acids (Free)

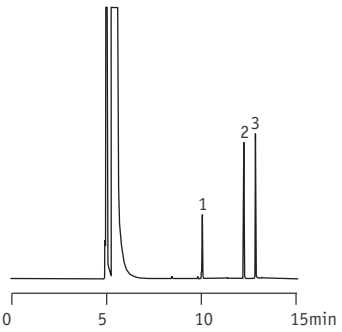


Column: VertiBond™ 1, 30 m x 0.53 mm, 5.0µm
Temp: 60°C to 180°C at 15°C/min,
Injector: 0.2µL Free Fatty Acid standard in water, 250 °C
Detector: FID
Carrier Gas: Hydrogen 50cm/sec (flow rate: 6cc/min)

VertiBond™ 1

Ordering Information				
Length (m)	I.D. (mm)	Film (µm)	Temp. (°C)	Part No.
60	0.25	0.10	360/370	0400-2005
		0.25	360/370	0400-2055
		0.50	360/370	0400-2095
		1.00	340/360	0400-2115
	0.32	0.10	360/370	0400-3005
		0.25	360/370	0400-3055
		0.50	360/370	0400-3095
		1.00	340/360	0400-3115
		1.50	320/340	0400-3155
		3.00	310/330	0400-3195
		5.00	300/300	0400-3215
	0.45	1.27	300/320	0400-4135
	0.53	0.10	360/370	0400-5005
		0.25	360/370	0400-5055
		0.50	360/370	0400-5095
		1.00	340/360	0400-5115
		1.20	340/360	0400-5125
		1.50	340/360	0400-5155
		3.00	340/360	0400-5195
		5.00	340/360	0400-5215
105	0.25	0.10	360/370	0400-2007
		0.25	360/370	0400-2057
		0.50	360/370	0400-2097
		1.00	340/360	0400-2117
	0.32	0.10	360/370	0400-3007
		0.25	360/370	0400-3057
		0.50	360/370	0400-3097
		1.00	340/360	0400-3117
		1.50	320/340	0400-3157
		3.00	310/330	0400-3197
	0.53	1.20	340/360	0400-5127
		3.00	340/360	0400-5197
		5.00	340/360	0400-5217

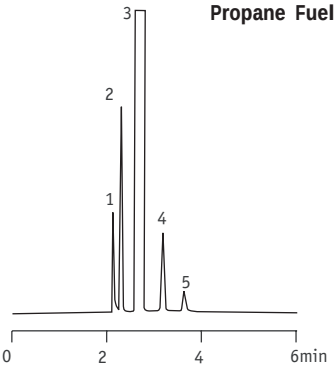
Personal Care Product Fragrances



1. Eucalyptol
2. Camphor
3. Menthol

Column: VertiBond™ 1, 60m x 0.25mm, 0.25µm
Temp: 80°C to 180°C at 5°C/min,
Injector: 1.0µL split at 275°C (split ratio 20:1)
Detector: FID at 300°C
Carrier gas: Hydrogen constant flow (0.6mL/min)

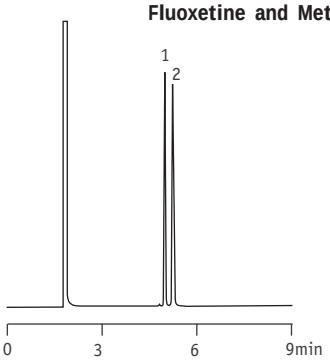
Propane Fuel



1. Methane
2. Ethane
3. Propane
4. Isobutane
5. Butane

Column: VertiBond™ 1, 60m x 0.53mm, 5.0µm
Temp: 40°C
Injector: 1.0µL direct injection at 200°C
Detector: FID
Carrier gas: Hydrogen 80cm/sec (flow rate: 10cc/min)

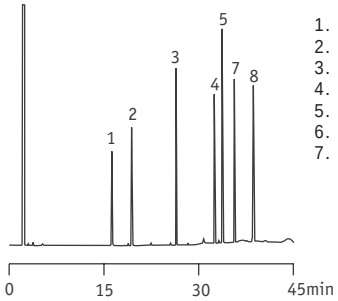
Fluoxetine and Metabolite



1. Norfluoxetine
2. Fluoxetine

Column: VertiBond™ 1, 30m x 0.32mm, 0.25µm
Temp: 200°C
Detector: FID
Carrier Gas: Helium at 1.06mL/min

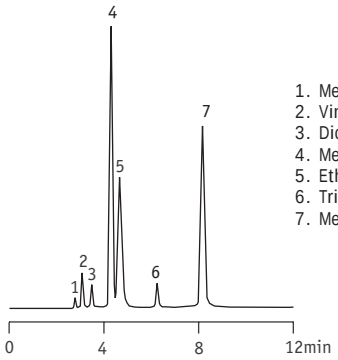
Phthalate and Adipate Esters



1. Dimethyl Phthalate
2. Diethyl Phthalate
3. Di-n-Butyl Phthalate
4. Butylbenzyl Phthalate
5. Di(2-ethylhexyl) Adipate
6. Di(2-ethylhexyl) Phthalate
7. Di-n-Octyl Phthalate

Column: VertiBond™ 1, 30m x 0.32mm, 0.25µm
Temp: 60°C (1 min hold) to 260°C at 6°C/min
Detector: FID at 295°C
Carrier Gas: Helium at 32cm/sec

Purgeable Halocarbons

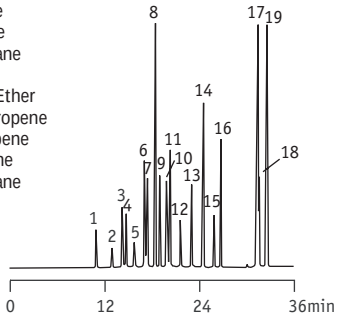


1. Methyl Chloride
2. Vinyl Chloride
3. Dichlorofluoromethane
4. Methyl Bromide
5. Ethyl Chloride
6. Trichlorofluoromethane
7. Methylene Chloride

Column: VertiBond™ 1, 30m x 0.53mm, 5.00µm
Temp: 35°C
Detector: FID
Carrier Gas: Helium at 3mL/min

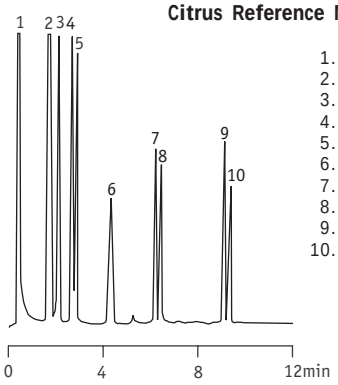
Halocarbons

1. 1,1-Dichloroethane
2. Chloroform
3. 1,2-Dichloroethane
4. 1,1,1-Trichloroethane
5. Carbon Tetrachloride
6. 1,2-Dichloropropane
7. Bromodichloromethane +Trichloroethene
8. 2-Chloroethyl Vinyl Ether
9. *trans*-1,3-Dichloropropene
10. *cis*-1,3-Dichloropropene
11. 1,2,2-Trichloroethane
12. Dibromochloromethane
13. Tetrachloroethene
14. Chlorobenzene
15. Bromoform
16. 1,1,2,2-Tetrachloroethane
17. *m*-Dichlorobenzene
18. *p*-Dichlorobenzene
19. *o*-Dichlorobenzene



Column: VertiBond™ 1, 30m x 0.53mm, 5.00µm
Temp: 40°C (5 min hold) to 200°C/min at 5°C/min
Detector: FID
Carrier Gas: Helium at 3mL/min

Citrus Reference Mix

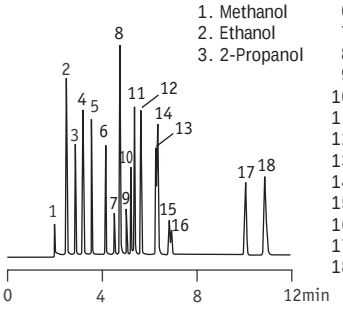


1. α-Pinene
2. Camphene
3. β-Pinene
4. *p*-Cymene
5. Limonene
6. Nonanal + Linalool
7. Terpen-4-ol
8. γ-Terpineol
9. Neryl Acetate
10. Geranyl Acetate

Column: VertiBond™ 1, 10m x 0.53mm, 1.20µm
Temp: 75°C (5min hold) to 150°C at 10°C/min
Detector: FID
Carrier Gas: Helium 5mL/min

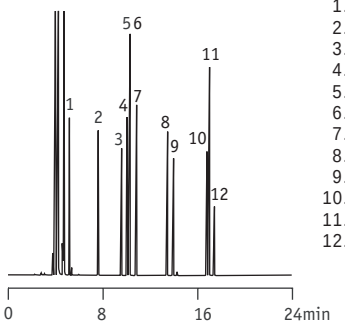
C1-C6 Alcohols

1. Methanol
2. Ethanol
3. 2-Propanol
4. 2-Methyl-2-propanol
5. 1-Propanol
6. 2-Butanol
7. 2-Methyl-1-propanol
8. 2-Methyl-2-butanol
9. 1-Butanol
10. 2,2-Dimethyl-1-propanol
11. 3-Methyl-2-butanol
12. 2-Pentanol + 3-Pentanol
13. 3-Methyl-1-butanol
14. 2-Methyl-1-butanol
15. 4-Methyl-2-pentanol
16. 1-Pentanol
17. 1-Hexanol
18. Cyclohexanol



Column: VertiBond™ 1, 30m x 0.53mm, 5.00µm
Temp: 35°C to 100°C at 5°C/min
Detector: FID
Carrier Gas: Helium at 3mL/min

Aromatic



1. Benzene
2. Toluene
3. Chlorobenzene
4. Ethylbenzene
5. *m*-Xylene
6. *p*-Xylene
7. *o*-Xylene
8. 1,4-Dichlorobenzene
9. 1,2-Dichlorobenzene
10. 1,2,4-Trichlorobenzene
11. Napthalene
12. 1,2,3-Trichlorobenzene

Column: VertiBond™ 1, 30m x 0.32mm, 1.00µm
Temp: 60°C (4min hold) to 200°C at 10°C/min
Detector: FID
Carrier Gas: Helium at 1.3mL/min