Analysis - GC Capillary Columns

UptiBond™ GC capillary columns

UptiBond™ is Interchim's proprietary GC capillary column technology that has been developed around rigorous, innovative manufacturing processes from the highest quality raw material. Every step of column manufacturing is strictly controlled, establishing a new standard in GC chromatography. UptiBond™ exhibits enhanced column to column reproducibility and the utilization of Interchim's in-house chemistry resources establish major product benefits such as ultra low levels of column bleeding.

Stationary phase selection guide

Applications	Composition	Polarity Isothermal/ Programmed	Temp. Range	Phases with Similar Polarity
Bonded Phases Amines, hydrocarbons, pesticides, PCBs, phenols, sulfur compounds,	100% dimethylpolysiloxane	Nonpolar	a : -60 to 325/350 b : -60 to 300/320 c : -60 to 260280	UBP1, DB-1, BP-1, HP-1 CP-Sil5, Rtx-1, OV-1,007-1
Alkaoids, drugs, FAMEs Halogenated compounds, Semi-volatiles, pesticides	5% phenyl - 95 % dimethyl polysiloxane	Nonpolar	a : -60 to 325/350 b : -60 to 300/320 c : -60 to 260/280	UB5P, DB-5, DB-5ms, DB-5ht, XTI-5, CP-Sil8CB, 007-2, OV-5, Rtx-5, Rtx-5, BPX-5, BP-5, SPB-5
Aroclors, alcohols, pesticides, VOAs	6% cyanopropyl-phenyl 94% dimethyl polysiloxane	Mid-polar	a : -20 to 280/300 b : -20 to 260/280	UB1301, DB-1301, DB-624, Rtx-624, Mtx-1301, CP-624, RTX-1301
Aroclors, Amines, pesticides pharmaceuticals	35% dimethyl polysiloxane	Mid-polar	a : 40 to 300/320	DB-35, RTX-35, SPB-35, AT-35
Volatile compounds		Mid-polar	a : 260/260	UB624, DB-624, OV624, ZB-624 HP-VOC, CP-Select624CB
Pesticides, herbicides, TMS Sugars, aroclors	14 % cyanopropyl-phenyl 86 % dimethyl polysiloxane	Mid-polar	a : -20 to 280/300 b : -20 to 260/280	UB1701, DB-1701, Rtx-1701, CP-Sil 19 CB, OV1701
Drugs, glycols, pesticides, steroids	50% phenyls, 50% methyl- polysiloxane	Mid-polar	a : 40 to 280/300 b : 40 to 260/280	UB17, UB17P, DB-17, DB-17ht, CP-Sil24CB, BPX200, 007-17, OV-17
Aldehydes, pesticides, Herbicides, organo-chlorine Organo-phosphorous		Polar	a : -45 to 240/260 b : -45 to 220/240	UB210, DB-210, Rtx-200
FAMEs, alditol acetates Neutral sterols	50 % cyanoproyl-phenyl 50 % methyl-polysiloxane	Polar Polar	a : 40 to 220/240 b : 40 to 200/220	UB225, DB-225, SP-2330, OV-225, Rtx-225, BP-225, 007-225
Solvents, glycols, alcohols	Polyethylene	Polar	a : 20 to 250/260 b : 20 to 230/240	UBWAX, DB-WAX, Carbowax 20M Rtx-WAX, ZB-WAX, HP-20M
Acids, alcohols, aldehydes Acrylates, ketones, nitriles	Polyethylene glycol-acid	Polar	a : 60 to 240/250 b : 60 to 230/240	UBFFAP, DB-FFAP, Stabilwax DA 007-FFAP, BP21,

a : d.i. < 530 µm - b : d.i. : 530 µm - c : d.i. > 2 µm

UptiBond™ GC capillary columns

UB1P - [100% Dimethyl Polysiloxane]

- Low bleed MS grade column
- Suitable upgrade from : DB-1, HP-1, Ultra-1, SPB-1, CP-Sil5CB, ZB-1, OV1
- Excellent general purpose column
- Hydrocarbon, pesticides, phenols, amines, flavors and fragrances

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.25	325/350	**UB1P152525**
0.25	30	0.25	325/350	**UB1P302525**
0.25	60	0.25	325/350	**UB1P602525**
0.32	15	0.25	325/350	**UB1P153225**
0.32	30	0.25	325/350	**UB1P303225**
0.32	60	0.25	325/350	**UB1P603225**

UB5P - [5% phenyl - 95% Dimethyl Polysiloxane]

- Low bleed MS grade column
- Suitable Upgrade from : DB-5, DB-5ms, HP-5, HP-5ms, SPB-5, VF-5ms, ZB-5, OV5, Rtx-5, Rtx-5ms,Rtx-5SilMS
- Excellent general purpose column
- Alkaloids, drugs, FAMEs, halogened compounds, aromatic compounds, pesticides

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.10	325/350	**UB5P152501**
0.25	15	0.25	325/350	**UB5P152525**
0.25	15	0.50	325/350	**UB5P152550**
0.25	30	0.10	325/350	**UB5P302501**
0.25	30	0.25	325/350	**UB5P302525**
0.25	30	0.50	325/350	**UB5P302550**
0.25	30	1.0	325/350	**UB5P302510**
0.25	60	0.10	325/350	**UB5P602501**
0.25	60	0.25	325/350	**UB5P602525**
0.32	15	0.10	325/350	**UB5P153201**
0.32	15	0.25	325/350	**UB5P153225**
0.32	15	0.50	325/350	**UB5P153205**
0.32	30	0.10	325/350	**UB5P303201**
0.32	30	0.25	325/350	**UB5P303225**
0.32	30	0.50	325/350	**UB5P303205**
0.32	60	0.10	325/350	**UB5P603201**
0.32	60	0.25	325/350	**UB5P603225**

UB17P - [50% phenyl - 50% Dimethyl Polysiloxane]

- Ideal for pesticide analysis
- Polar compounds, FAMEs, free phenols, chlorinated pesticides, basic drugs, phatalate esters
- Suitable upgrade from : DB-17, DB-17ms, Rtx-50, ZB-50, CP-Sil19 CB, BPX-50, 007-17

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.25	320/350	**UB17P152525**
0.25	30	0.25	320/350	**UB17P302525**
0.25	60	0.25	320/350	**UB17P602525**
0.32	15	0.25	320/350	**UB17P153225**
0.32	30	0.25	320/350	**UB17P303225**
0.32	60	0.25	320/350	**UB17P603225**

UB1301 - [6% Cyanopropylphenyl - 94% Dimethylpolysiloxane]

- Ideal for pesticide analysis
- Polar compounds, FAMEs, free phenols, chlorinated pesticides, basic drugs, phatalate esters
- Suitable Upgrade from : DB-1301, Rtx-1301, CPSil1301 etc..

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.25	280/300	**UB1301152525**
0.25	15	0.5	280/300	**UB1301152550**
0.25	15	1	260/280	**UB1301152510**
0.25	30	0.25	280/300	**UB1301302525**
0.25	30	0.5	280/300	**UB1301302505**
0.25	30	1	260/280	**UB1301302510**
0.25	60	0.25	280/300	**UB1301602525**
0.25	60	0.5	280/300	**UB1301602550**
0.25	60	1	260/280	**UB1301602510**
0.32	15	0.25	280/300	**UB1301153225**
0.32	15	0.5	280/300	**UB1301153205**
0.32	15	1	260/280	**UB1301153210**
0.32	30	0.25	280/300	**UB1301303225**
0.32	30	0.5	280/300	**UB1301303205**
0.32	30	1	260/280	**UB1301303210**
0.32	60	0.25	280/300	**UB1301603225**
0.32	60	0.5	280/300	**UB1301603205**
0.32	60	1	260/280	**UB1301603210**
0.53	15	1	260/280	**UB1301155310**
0.53	30	1	260/280	**UB1301305310**

UB624

- UB624 is tested with volatile halogenated compounds, making it an excellent choice for Method 624, 501, 503.1, 524.2, 601-603 and 8260.
- Suitable Upgrade from : DB-624, Rtx-624, CP-Select 624CB, SPB-624, BP-624, AT-624, ZB-624

Volatile organic compounds (VOCs), residual solvents, volatile aromatic and unsaturated hydrocarbons.

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	30	1.4	260/260	**UB624302514**
0.25	60	1.4	260/260	**UB624602514**
0.32	30	1.8	260/260	**UB624303218**
0.32	30	3	260/260	**UB624303230**
0.32	60	1.8	260/260	**UB624603218**
0.53	30	3	260/260	**UB624305330**
0.53	75	3	260/260	**UB624755330**

UB1701 - [14% Cyanopropylphenyl - 86% Methylpolysiloxane]

- Suitable upgrade from : DB-1701, Rtx-1701, SPB-1701, CP-Sil19CB, OV-1701, 007-1701, AT-1701
- Pesticide organochlorides, Sugars, TMS, Triazines, Herbicides, Drugs

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.25	280/300	**UB1701152525**
0.25	15	0.50	280/300	**UB1701152505**
0.25	15	1.0	260/280	**UB1701152510**
0.25	30	0.25	280/300	**UB1701302525**
0.25	30	0.50	280/300	**UB1701302505**
0.25	30	1.0	260/280	**UB1701302510**
0.25	60	0.25	280/300	**UB1701602525**
0.25	60	0.50	280/300	**UB1701602505**
0.25	60	1.0	260/280	**UB1701602510**
0.32	15	0.25	280/300	**UB1701153225**
0.32	15	0.50	280/300	**UB1701153205**
0.32	15	1.0	260/280	**UB1701153210**
0.32	30	0.25	280/300	**UB1701303225**
0.32	30	0.25	280/300	**UB1701303225**
0.32	30	0.50	280/300	**UB1701303205**
0.32	30	1.0	260/280	**UB1701303210**
0.32	60	0.25	280/300	**UB1701603225**
0.32	60	0.50	280/300	**UB1701603205**
0.32	60	1.0	260/280	**UB1701603210**
0.53	15	1.0	260/280	**UB1701155310**
0.53	30	1.0	260/280	**UB1701305310**

UptiBond™ GC capillary columns

UB17P - [50% Diphenyl – 50% Dimethylpolysiloxane]

- Ideal for pesticide analysis
- Polar compounds, FAMEs, free phenols, chlorinated pesticides, basic drugs, phatalate esters
- Suitable upgrade from : DB-17, DB-17ms, Rtx-50, ZB-50, CP-Sil19 CB, BPX-50, 007-17

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.25	320/340	**UB17152525**
0.25	30	0.25	320/340	**UB17302525**
0.25	60	0.25	320/340	**UB17602525**
0.32	30	0.25	320/340	**UB17303225**
0.32	60	0.25	320/340	**UB17603225**
0.53	15	1.0	300/320	**UB17155310**
0.53	30	1.0	300/320	**UB17305310**

UB210

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	30	0.25	240/260	**UB210302525**

UB225

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	30	0.25	240/260	**UB225302525**

UBWAX - [Polyethylene Glycol]

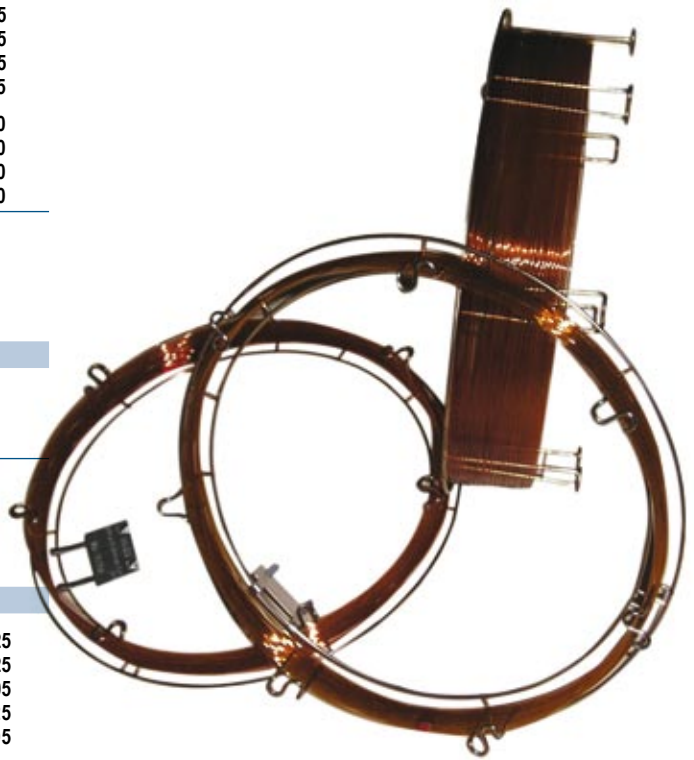
I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.25	250/260	**UBWAX152525**
0.25	30	0.25	250/260	**UBWAX302525**
0.25	30	0.50	250/260	**UBWAX302505**
0.25	60	0.25	250/260	**UBWAX602525**
0.25	60	0.50	250/260	**UBWAX602505**
0.32	15	0.25	250/260	**UBWAX153225**
0.32	30	0.25	250/260	**UBWAX303225**
0.32	30	0.50	250/260	**UBWAX303205**
0.32	60	0.25	250/260	**UBWAX603225**
0.32	60	0.50	250/260	**UBWAX603205**
0.53	15	1.0	230/240	**UBWAX155310**
0.53	15	2.0	230/240	**UBWAX155320**
0.53	30	1.0	230/240	**UBWAX305310**
0.53	30	2.0	230/240	**UBWAX305320**

UBAmines

I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.32	15		265/300	**UBAMIN1532**
0.32	30		265/300	**UBAMIN3032**
0.32	60		265/275	**UBAMIN6032**

UBFFAP - [Polyethylene Glycol]

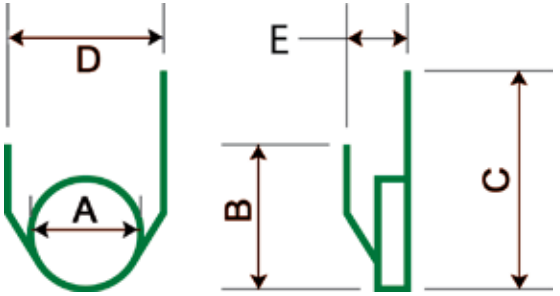
I.D mm	Length M	Thickness µm	Temp. Range (°C)	P/N
0.25	15	0.25	230/240	**UBFFAP152525**
0.25	30	0.25	230/240	**UBFFAP302525**
0.25	30	0.50	230/240	**UBFFAP302505**
0.25	60	0.25	230/240	**UBFFAP602525**
0.25	60	0.50	230/240	**UBFFAP602505**
0.32	30	0.25	230/240	**UBFFAP303225**
0.32	60	0.25	230/240	**UBFFAP603225**
0.53	15	1.0	220/230	**UBFFAP155310**
0.53	30	1.0	220/230	**UBFFAP305310**



Uptipacked™ GC columns

Interchim can supply packed columns made with any combination of phases

Premium grade stainless tubing (only manufactured for GC only)
Including brass Swagelock fittings
Delivery 2 or 3 weeks



For order enquiries please indicate :

1. Type of tubing required i.e SS or Glass
2. Length and OD of the column
3. Loading % of liquid phase
4. Nature of liquid phase
5. Solid support and particle size (mesh)
6. Name and model of GC chromatograph

For GC glass columns please specify your column configuration according to the drawing highlighted above.

Order enquiry example

6'	x	1/8"	Stainless steel	10%	OV1	Chromosorb WMP	80/100	for HP 6890
Length		OD	Tubing type	Percentage	Liquid phase	Solid support	Mesh size	GC model

Standard SS Uptipacked

- Available from stock
- 1.8 m x 1/8"

Description	P/N
10% Apiezon L on Chromosorb W-HP 80/100	**793980**
10% Carbowax 1500 on Chrom. W-HP 80/100	**816520**
10% Carbowax 20 M on Chromosorb W-HP 80/100	**245691**
10% Carbowax 20 M on Chromosorb W-AW 80/100	**184630**
10% Carbowax 20 M-TPA on Chrom. W-AW 80/100	**742060**
Chromosorb 101, 80/100	**834260**
Chromosorb 102, 80/100	**249630**
10% DEGS on Chromosorb W-AW 80/100	**787230**
5% FFAP on Chromosorb W-AW 80/100	**835850**
3% OV-1 on Chromosorb W-HP 80/100	**765440**

Description	P/N
10% OV-1 on Chromosorb W-HP 80/100	**867980**
3% OV-17 on Chromosorb W-HP 80/100	**393090**
10% OV-17 on Chromosorb W-HP 80/100	**222540**
3% OV-101 on Chromosorb W-HP 80/100	**743800**
10% OV-101 on Chromosorb W-HP 80/100	**802070**
3%OV-225 on Chromosorb W-HP 80/100	**848440**
10% OV-225 on Chromosorb W-HP 80/100	**882870**
3% SE-30 GC Grade on Chromosorb W-HP 80/100	**388810**
Porapak Q, 80/100	**520800**
Porapak N, 80/100	**978770**

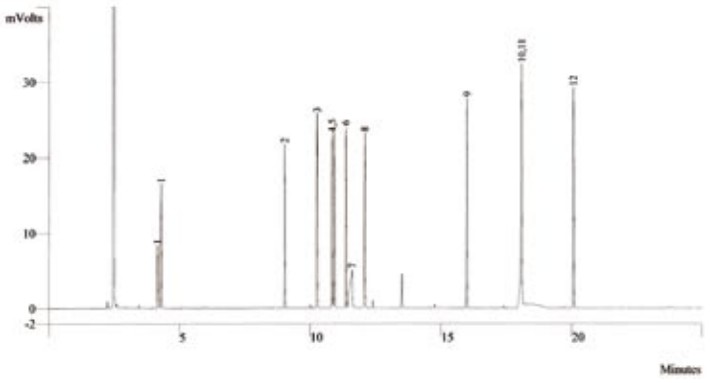
Analysis - GC Capillary Columns

UptiBond™ GC capillary columns - applications

Interchim columns are tested according Grob test process. Each compound of this test mixture measures, efficency, film thickness, acid & basic characteristics and column activity.

UptiBond™ UB1P

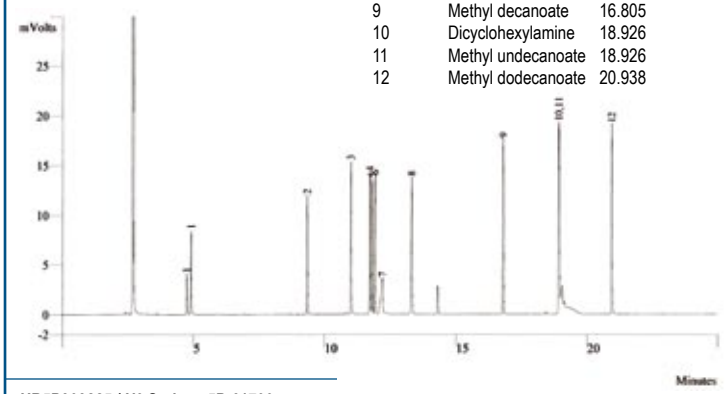
	Compound	Rt (min)		Compound	Rt (min)
1	2,3-Butanediol	4.159 et 4.293	7	2-Ethylhexanoic acid	11.599
2	n-Decane	9.019	8	2,6-Dimethylaniline	12.078
3	1-Octanol	10.254	9	Methyl decanoate	15.984
4	2,6-Dimethylphenol	10.829	10	Dicyclohexylamine	18.074
5	1-Nonanal	10.920	11	Methyl undecanoate	18.074
6	n-Undecane	11.357	12	Methyl dodecanoate	20.058



UB1P303225 / N° Series : 1P-53542
Temp. : 40°C to 190°C at 6°C /min
Carrier Gas : Helium, 20 cm/sec (FID)

UptiBond™ UB5P

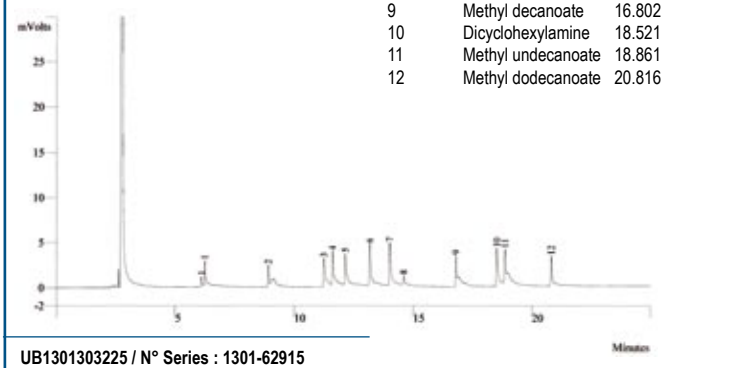
	Compound	Rt (min)		Compound	Rt (min)
1	2,3-Butanediol	4.742 et 4.901	5	1-Nonanal	11.812
2	n-Decane	9.332	6	2,6-Dimethylphenol	11.914
3	1-Octanol	10.996	7	2-Ethylhexanoic acid	12.203
4	n-Undecane	11.724	8	2,6-Dimethylaniline	13.314
			9	Methyl decanoate	16.805
			10	Dicyclohexylamine	18.926
			11	Methyl undecanoate	18.926
			12	Methyl dodecanoate	20.938



UB5P303225 / N° Series : 5P-61700
Temp. : 40°C to 190°C at 6°C /min
Carrier Gas : Helium, 20 cm/sec (FID)

UptiBond™ UB1301

	Compound	Rt (min)		Compound	Rt (min)
1	2,3-Butanediol	6.096 et 6.249	5	1-Nonanal	12.148
2	n-Decane	8.922	6	2,6-Dimethylphenol	13.185
3	n-Undecane	11.254	7	2,6-Dimethylaniline	14.028
4	1-Octanol	11.627	8	2-Ethylhexanoic acid	14.609
			9	Methyl decanoate	16.802
			10	Dicyclohexylamine	18.521
			11	Methyl undecanoate	18.861
			12	Methyl dodecanoate	20.816

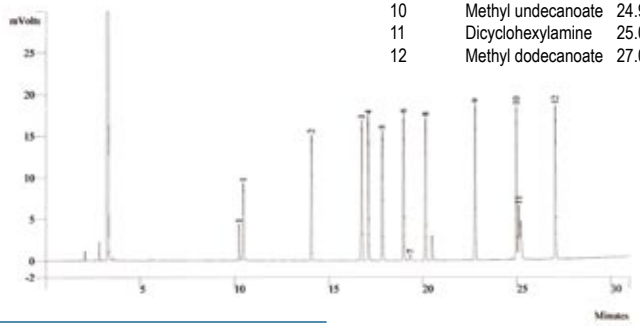


UB1301303225 / N° Series : 1301-62915
Temp. : 40°C to 190°C at 6°C /min
Carrier Gas : Helium, 20 cm /sec (FID)

UptiBond™ GC capillary columns - applications

UptiBond™ UB624

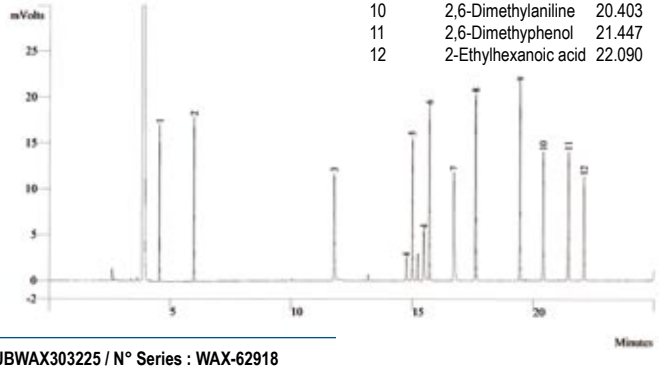
	Compound	Rt (min)		Compound	Rt (min)
1	2,3-Butanediol	10.245 et 10.469	5	1-Nonanal	17.847
2	n-Decane	14.090	6	2,6-Dimethylphenol	18.973
3	n-Undecane	16.762	7	2-Ethylhexanoic acid	19.343
4	1-Octanol	17.103	8	2,6-Dimethylaniline	20.139
			9	Methyl decanoate	22.771
			10	Methyl undecanoate	24.956
			11	Dicyclohexylamine	25.090
			12	Methyl dodecanoate	27.023



UB624303218 / N° Series : 624-62911
Temp. : 40°C to 230°C at 6°C /min
Carrier Gas : Helium, 20 cm /sec (FID)

UptiBond™ UBWAX

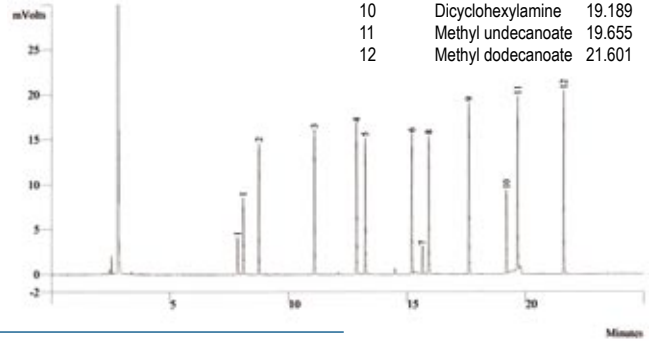
	Compound	Rt (min)		Compound	Rt (min)
1	n-Decane	4.553	5	1-Octanol	14.999
2	n-Undecane	5.973	6	Methyl decanoate	15.702
3	1-Nonanal	11.771	7	Dicyclohexylamine	16.710
4	2,3-Butanediol	14.765 et 15.477	8	Methyl undecanoate	17.612
			9	Methyl dodecanoate	19.445
			10	2,6-Dimethylaniline	20.403
			11	2,6-Dimethyphenol	21.447
			12	2-Ethylhexanoic acid	22.090



UBWAX303225 / N° Series : WAX-62918
Temp. : 40°C to 190°C at 6°C /min
Carrier Gas : Helium, 20 cm /sec (FID)

UptiBond™ UB1701

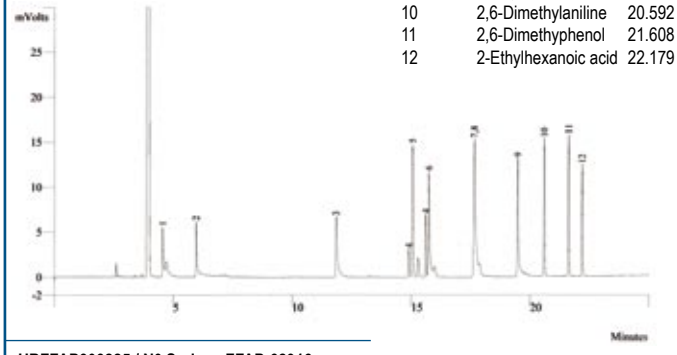
	Compound	Rt (min)		Compound	Rt (min)
1	2,3-Butanediol	7.842 et 8.079	5	1-Nonanal	13.238
2	n-Decane	8.740	6	2,6-Dimethylphenol	15.200
3	n-Undecane	11.081	7	2-Ethylhexanoic acid	15.650
4	1-Octanol	12.866	8	2,6-Dimethylaniline	15.914
			9	Methyl decanoate	17.606
			10	Dicyclohexylamine	19.189
			11	Methyl undecanoate	19.655
			12	Methyl dodecanoate	21.601



UB1701303225 / N° Series : 170162914
Temp. : 40°C to 190°C at 6°C /min
Carrier Gas : Helium, 20 cm /sec (FID)

UptiBond™ UBFFAP

	Compound	Rt (min)		Compound	Rt (min)
1	n-Decane	4.562	5	1-Octanol	15.062
2	n-Undecane	5.974	6	Methyl decanoate	15.745
3	1-Nonanal	11.846	7	Dicyclohexylamine	17.650
4	2,3-Butanediol	14.905 et 15.617	8	Methyl undecanoate	17.650
			9	Methyl dodecanoate	19.477
			10	2,6-Dimethylaniline	20.592
			11	2,6-Dimethyphenol	21.608
			12	2-Ethylhexanoic acid	22.179



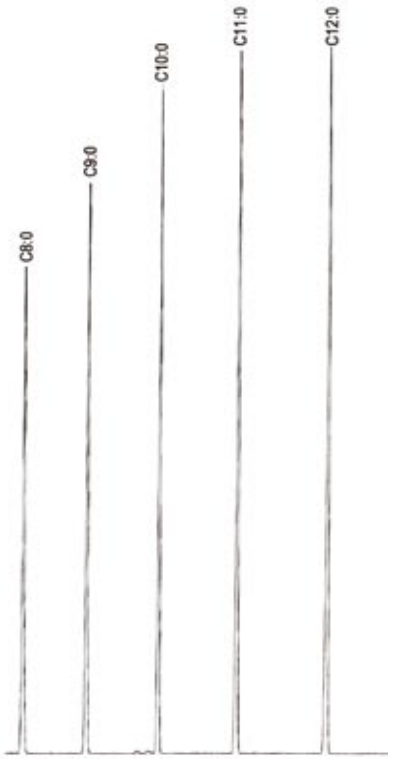
UBFFAP303225 / N° Series : FFAP-62916
Temp. : 40°C to 190°C at 6°C /min
Carrier Gas : Helium, 20 cm /sec (FID)

Analysis - GC Capillary Columns

UptiBond™ GC capillary columns - applications

Fatty acid methyl ester

1 - 3.129 C8:0
2 - 3.623 C9:0
3 - 4.182 C10:0
4 - 4.789 C11:0
5 - 5.487 C12:0



UB5-Premium 0.25 µm, 30 m x 0.25 mm
Carrier Gas : He, 25 cm /sec, constant flow
Oven : 130°C (hold 1 min)
200°C at 20°C /min (hold 2 min)
Injection : 1 µl, split 1:100, 270°C
Detection : FID, 280°C

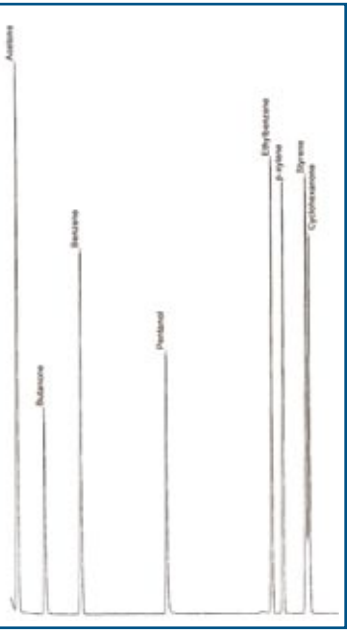
Alcohols

1 - 2.671 Methanol
2 - 2.884 Ethanol
3 - 3.025 Acetone
4 - 3.106 Isopropanol
5 - 4.040 Butanone
6 - 7.071 3-Methylbutan-1-ol
7 - 7.163 2-Methylbutan-1-ol
8 - 7.816 Pentan-1-ol

UB1-Premium 0.25µm, 30 m x 0.25 mm
Carrier Gas : He, 25 cm /sec, constant flow
Oven : 30°C (hold 4 min)
100°C at 10°C /min
Injection : 1 µl, split 1:100, 200°C
Detection : FID, 200°C

Solvents

1 - 2.555 Acetone
2 - 3.018 Butanone
3 - 3.628 Benzene
4 - 5.074 Pentanol
5 - 6.847 Ethylbenzene
6 - 7.039 p-Xylene
7 - 7.430 Styrene
8 - 7.480 Cyclohexanone



UB5-Premium 0.25µm, 30 m x 0.25 mm
Carrier Gas : He, 25 cm /sec, constant flow
Oven : 30°C (hold 3 min)
100°C at 10°C /min
(hold 2 min)
Injection : 1 µl,
split 1:100, 250°C
Detection : FID, 300°C

UptiBond™ GC capillary columns - applications

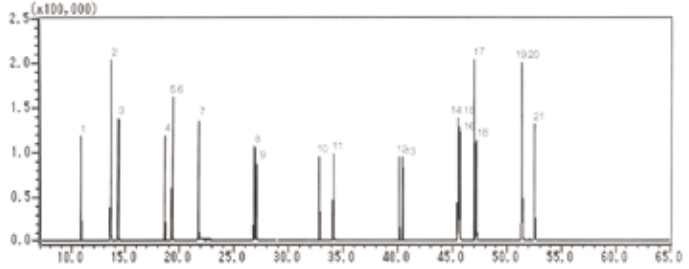
Hydrocarbons

1 - 2.511 unknown
2 - 3.680 Hexane
3 - 4.812 Benzene
4 - 5.944 Heptane
5 - 9.721 Octane
6 - 11.183 Ethylbenzene
7 - 11.988 Nonane
8 - 13.562 Decane
9 - 14.802 Undecane
10 - 15.870 Dodecane
11 - 16.839 Tridecane

UB5-Premium 0.25 µm, 30 m x 0.25 mm
Carrier Gas : He, 25 cm /sec, constant flow
Oven : 35°C (hold 7.5 min)
200°C at 15°C /min (hold 5 min)
Injection : 1 µl, split 1:100, 250°C
Detection : FID, 250°C

HAPs

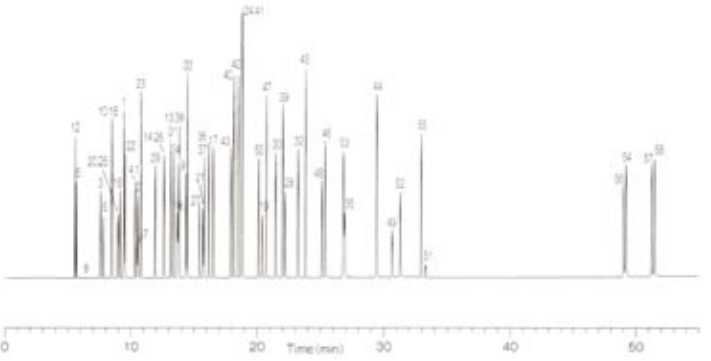
1- Naphthalene
2- 2-Methylnaphthalene
3- 1-Methylnaphthalene
4- Acenaphthylene
5- Acenaphthene
6- Biphenyl
7- Fluorene
8- Phenanthrene
9- Anthracene
10- Fluoranthene
11- Pyrene
12- Chrysene
13- Benzo[a] anthracene
14- Benzo[b] anthracene
15- Benzo[k] anthracene
17- Benzo[e]pyrene
18- Benzo[e] fluoranthene
19- Dibenz[a,h] anthracene
20- Benzo[g,h,i] perylene
21- Indeno [1,2,3-cd]pyrene



UB17P 0.25 mm I.D. x 30 m df = 0.25 µm
Oven : 80°C (3 min hold) ; 5°C/min 340°C (5 min hold)
Detection : MS
Sample Conc. : each 10 mg/L

Mixture

1- Methanol
2- Ethanol
3- Acetone
4- i-Propanol
5- Ethyl ether
6- Methyl acetate
7- Dichloromethane
8- Carbon disulfide
9- n-Propanol
10- trans-1,2-Dichloroethylene
11- Methyl ethyl ketone
12- Hexane
13- 2-Butanol
14- cis_1,1-Dichloroethylene
15- Ethyl acetate
16- Chloroform
17- i-Butanol
18- Tetrahydrofuran
19- Methyl cellosolve
20- 1,1,1-Trichloroethane
21- 1,2-Dichloroethane
22- i-Propyl acetate
23- Benzene
24- n-Butanol
25- Carbon tetrachloride
26- Trichloroethylene
27- 1,4-Dioxane
28- Ethyl cellosolve
29- n-Propyl acetate
30- i-Amyl alcohol
31- Methyl i-butyl ketone
32- n-Amyl alcohol
33- Toluene
34- i-Butyl acetate
35- N,N-Dimethylformamide
36- Methyl n-butyl ketone
37- n-Butyl acetate
38. Tetrachloroethylene
39- Chlorobenzene
40- Ethylbenzene
41- m-Xylene
42- p-Xylene
43- i-Amyl Acetate
44- Cyclohexanol
45- Styrene
46- Cyclohexanone
47- o-Xylene
48- Cellosolve acetate
49- Butyl cellosolve
50- n-Amyl acetate
51- 1,1,2,2-tetrachloroethane
52- Methylcyclohexanol
53- Methylcyclohexanone
54- PHenol
55- o-Dichlorobenzene
56- o-Cresol
57- m-Cresol
58- p-Cresol



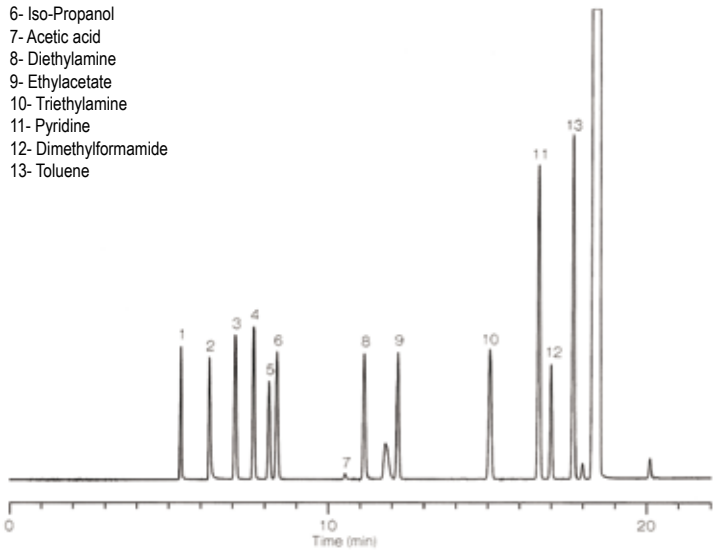
UBWAX 0.25 mm I.D. x 60 m df = 0.25 µm
Oven : 40°C (5 min hold) 4°C /min 230°C
Injection : Split
Detection : FID

Analysis - GC Capillary Columns

UptiBond™ GC capillary columns - applications

Mixture

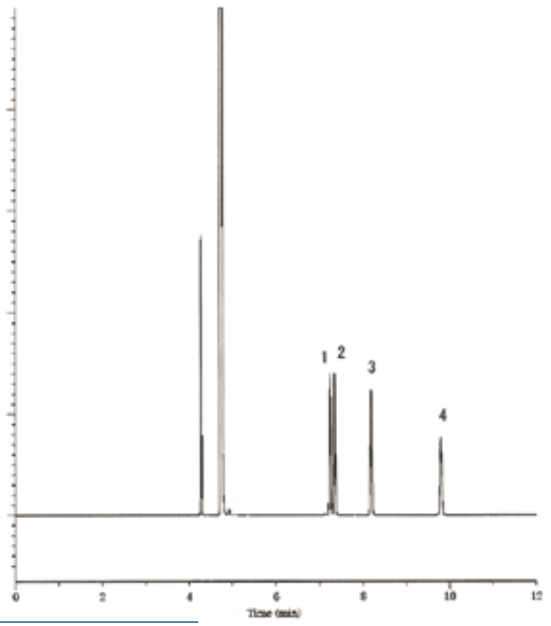
1- Methanol
2- Dimethylamine
3- Ethanol
4- Acetonitrile
5- Acetone
6- Iso-Propanol
7- Acetic acid
8- Diethylamine
9- Ethylacetate
10- Triethylamine
11- Pyridine
12- Dimethylformamide
13- Toluene



UB Amines 0.32 mm I.D. x 60 m
Oven : 50°C (hold 3 min) 10°C /min 220°C (5 min. Hold)
Detection : FID 250°C
Injecteur : 260°C
Split ratio : 1:50
Samples : solvents & amines

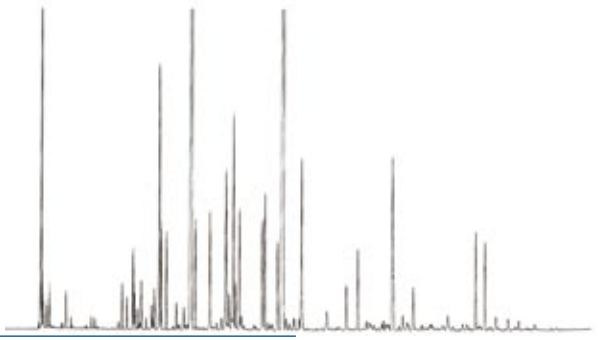
Xylene compound

1- p-Xylene
2- m-Xylene
3- o-Xylene
4- Styrene



UBFFAP 0.25 mm I.D. x 60 m df = 0.5 µm
Oven : 150°C
Injection : 250°C
Detection : FID 250°C

Fragrances

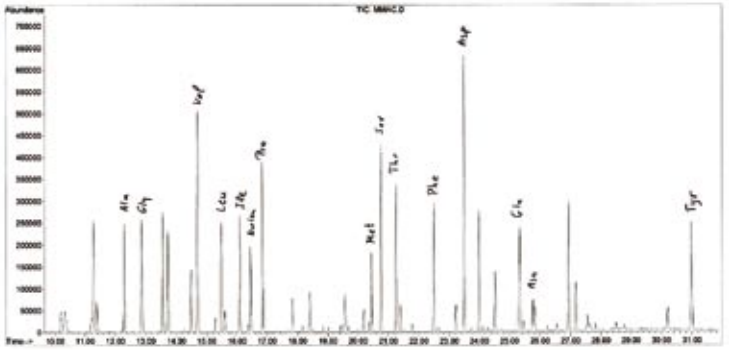


UB5-Premium 0.25 µm, 30 m x 0.25 mm
Carrier Gas : He, 0.1 cm /sec, constant flow
Oven : 40°C ; 85°C at 100°C /min ; 180°C at 3°C /min
Injection : 1 µl, split 1:100, 250°C
Detection : FID, 250°C

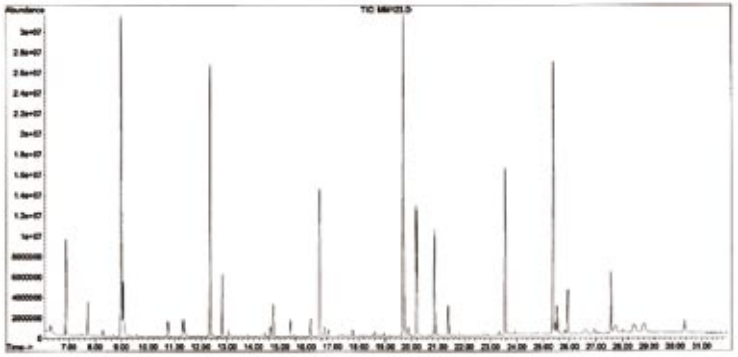
UptiBond™ GC capillary columns - applications

Amino acids analysis

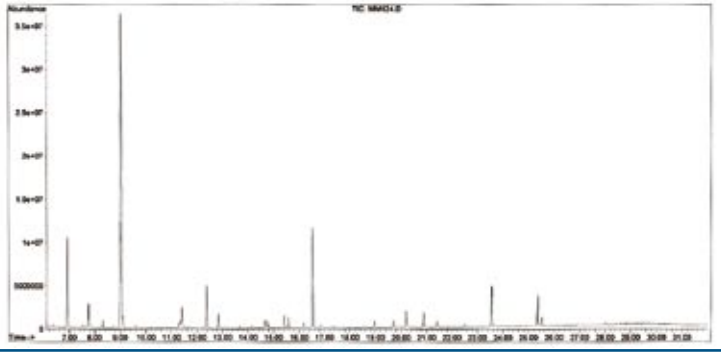
Amino acids standard



Mushroom tissue with nitrogen



Mushroom tissue with nitrogen



UB5-Premium 0.25µm, 30 m x 0.25 mm
Carrier Gas : Helium 1.2 ml /min
Oven : 110°C for 3 min
110°C - 260°C at 6°C /min
260°C for 4 min
Injection : 250°C
1/10 µl injection
Detection : MSD

Sample preparation :
- Lyophilization of mushrooms
- Ethanol extraction
- Dry evaporation
- Dissolution in HCl
- Dry evaporation
- Derivatization with MTBSTFA/ DMF (5/1)
  3 min 83°C