

## TraceGOLD GC Columns

TraceGOLD GC columns offer you a leap forward in column performance delivering low bleed and superior inertness ideally suited to MS applications.

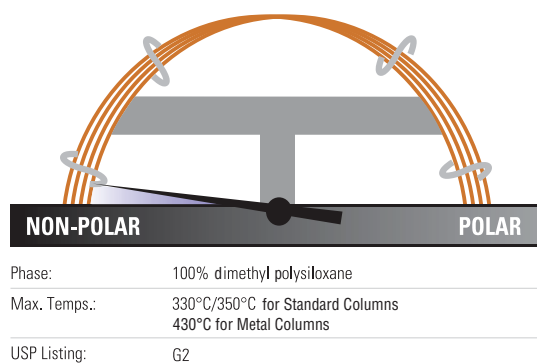
TG-1MS .....	<b>5-037</b>	TG-225MS .....	<b>5-051</b>
TG-5MS .....	<b>5-038</b>	TG-200MS .....	<b>5-052</b>
TG-5SiIMS .....	<b>5-038</b>	TG-WaxMS .....	<b>5-053</b>
TG-5MS AMINE .....	<b>5-040</b>	TG-WaxMS A .....	<b>5-054</b>
TG-5HT .....	<b>5-041</b>	TG-WaxMS B .....	<b>5-055</b>
TG-SQC .....	<b>5-045</b>	TG-POLAR .....	<b>5-056</b>
TG-35MS .....	<b>5-043</b>	TG-XLBMS .....	<b>5-057</b>
TG-35MS AMINE .....	<b>5-044</b>	TG-VRX .....	<b>5-058</b>
TG-1301MS .....	<b>5-045</b>	TG-VMS .....	<b>5-059</b>
TG-624 .....	<b>5-046</b>	TG-OCP I / TG OCP II .....	<b>5-060</b>
TG-624SiIMS .....	<b>5-047</b>	TG-OPP I / TG-OPP II .....	<b>5-061</b>
TG-1701MS .....	<b>5-048</b>	TG-ALC Plus I / TG-ALC Plus II .....	<b>5-062</b>
TG-17MS .....	<b>5-049</b>	TG-Dioxin .....	<b>5-063</b>
TG-17SiIMS .....	<b>5-050</b>		



## TraceGOLD TG-1MS GC Columns

Exceptionally low bleed for optimal signal-to-noise ratio, sensitivity and MS integrity

- Non-polar
- Equivalent to USP G2



### TraceGOLD TG-1MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.10	10	0.1	<b>26099-0200</b>	1 Each
0.20	12	0.33	<b>26099-5820</b>	1 Each
0.15	10	0.15	<b>26099-2750</b>	1 Each
		0.15	<b>26099-2760</b>	1 Each
		0.15	<b>26099-2940</b>	1 Each
0.18	20	0.18	<b>26099-5780</b>	1 Each
0.25	15	0.25	<b>26099-1300</b>	1 Each
		0.5	<b>26099-2110</b>	1 Each
		1.0	<b>26099-2840</b>	1 Each
	30	0.25	<b>26099-1420</b>	1 Each
		0.5	<b>26099-2230</b>	1 Each
		1.0	<b>26099-2960</b>	1 Each
	30 with 5m SafeGuard	0.25	<b>26099-1425</b>	1 Each
	60	0.25	<b>26099-1540</b>	1 Each
		0.5	<b>26099-2350</b>	1 Each
		1.0	<b>26099-3080</b>	1 Each
0.25		<b>26099-1310</b>	1 Each	
0.32	15	1.0	<b>26099-2850</b>	1 Each
		0.25	<b>26099-1430</b>	1 Each
		0.5	<b>26099-2240</b>	1 Each
	30	1.0	<b>26099-2970</b>	1 Each
		3.0	<b>26099-4840</b>	1 Each
		0.25	<b>26099-1550</b>	1 Each
		0.5	<b>26099-2360</b>	1 Each
	60	1.0	<b>26099-3090</b>	1 Each
		0.5	<b>26099-2130</b>	1 Each
		1.0	<b>26099-2860</b>	1 Each
1.5		<b>26099-3340</b>	1 Each	
0.5		<b>26099-2250</b>	1 Each	
0.53	15	1.0	<b>26099-2980</b>	1 Each
		1.5	<b>26099-3360</b>	1 Each
		1.0	<b>26099-2985</b>	1 Each
	30	0.5	<b>26099-2250</b>	1 Each
		1.0	<b>26099-2980</b>	1 Each
		1.5	<b>26099-3360</b>	1 Each
	30 with 5m SafeGuard	1.0	<b>26099-2985</b>	1 Each

### Applications:

- Hydrocarbons
- Solvent impurities
- PCB congeners
- Aroclor mixes
- Simulated distillation
- Drugs of abuse
- Natural gas odorants
- Essential oils
- Pesticides

### Similar to:

- Rxi-1ms
- DB-1
- DB-1ms
- HP-1
- HP-1ms
- Ultra-1
- SPB-1
- Equity-1
- VF-1ms
- CP-Sil 5 CB Low Bleed/MS

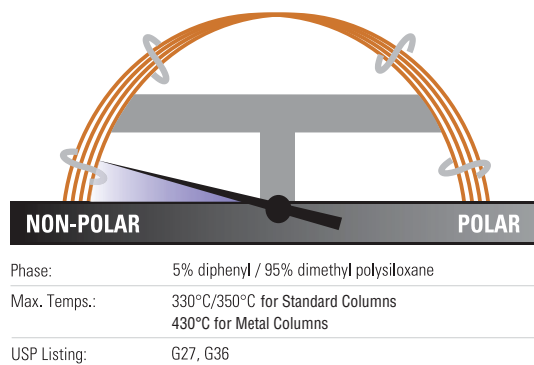
### TraceGOLD TG-1MT Metal GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.25	<b>26M99-1300</b>	1 Each
	30	0.25	<b>26M99-1420</b>	1 Each
0.53	5	0.1	<b>26M99-4130</b>	1 Each
		0.88	<b>26M99-4120</b>	1 Each
	6	0.15	<b>26M99-4100</b>	1 Each

## TraceGOLD TG-5MS GC Columns

The most widely used MS phase in gas chromatography

- Low polarity phase
- Low bleed for excellent signal-to-noise ratio, sensitivity and mass spectral integrity
- Exceptional inertness ideal for analysis of active compounds
- Equivalent to USP G27 phase



### TraceGOLD TG-5MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.10	10	0.1	<b>26098-0200</b>	1 Each
0.15	10	0.15	<b>26098-2750</b>	1 Each
	20	0.15	<b>26098-2760</b>	1 Each
	40	0.15	<b>26098-2940</b>	1 Each
0.18	20	0.18	<b>26098-5780</b>	1 Each
	20 with 5m SafeGuard	0.18	<b>26098-5785</b>	1 Each
0.25	10	0.25	<b>26098-1180</b>	1 Each
		0.25	<b>26098-1300</b>	1 Each
	15	1.0	<b>26098-2840</b>	1 Each
		0.25	<b>26098-1305</b>	1 Each
		0.25	<b>26098-1420</b>	1 Each
		0.5	<b>26098-2230</b>	1 Each
	30	1.0	<b>26098-2960</b>	1 Each
		0.1	<b>26098-0475</b>	1 Each
		0.25	<b>26098-1425</b>	1 Each
		0.25	<b>26098-1540</b>	1 Each
	60	0.5	<b>26098-2350</b>	1 Each
			<b>26098-3080</b>	1 Each
1.0		<b>26098-2850</b>	1 Each	
0.25		<b>26098-1430</b>	1 Each	
0.5		<b>26098-2240</b>	1 Each	
1.0		<b>26098-2970</b>	1 Each	
0.32	15	0.25	<b>26098-1435</b>	1 Each
		0.25	<b>26098-1550</b>	1 Each
		0.5	<b>26098-2360</b>	1 Each
	30	1.0	<b>26098-3090</b>	1 Each
		0.25	<b>26098-1320</b>	1 Each
		0.5	<b>26098-2130</b>	1 Each
0.53	15	1.0	<b>26098-2860</b>	1 Each
		1.5	<b>26098-3340</b>	1 Each
		0.25	<b>26098-1440</b>	1 Each
		0.5	<b>26098-2250</b>	1 Each
		1.0	<b>26098-2980</b>	1 Each
	30	1.5	<b>26098-3360</b>	1 Each
		5.0	<b>26098-4100</b>	1 Each

### Applications:

- Semi-volatiles
- Phenols
- Amines
- Residual solvents and solvent impurities
- Drugs of abuse
- Pesticides
- PCB congeners
- Aroclor mixes

### Similar to:

- Rxi-5ms
- DB-5
- HP-5
- HP-5ms
- Ultra-2
- SPB-5
- Equity-5
- CP-Sil 8

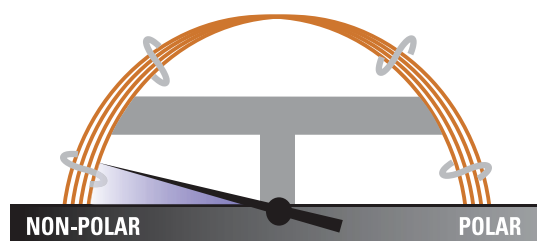
### TraceGOLD TG-5MT Metal GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.1	<b>26M98-0350</b>	1 Each
		0.25	<b>26M98-1300</b>	1 Each
	30	0.25	<b>26M98-1420</b>	1 Each
		0.25	<b>26M98-1540</b>	1 Each

## TraceGOLD TG-5SiIMS GC Columns

Incorporate phenyl groups in the polymer backbone for improved thermal stability, reduced bleed and reduced susceptibility to oxidation

- Low polarity, silarylene phase
- Designed for low bleed and outstanding inertness



Phase:	5% phenyl / 95% dimethyl arylene polysiloxane
Max. Temps.:	330°C/350°C
USP Listing:	G27, G36

### TraceGOLD TG-5SiIMS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.15	10	0.15	<b>26096-2750</b>	1 Each
	20	0.15	<b>26096-2760</b>	1 Each
	40	0.15	<b>26096-2940</b>	1 Each
0.18	20	0.18	<b>26096-5780</b>	1 Each
0.25	15	0.25	<b>26096-1300</b>	1 Each
		0.5	<b>26096-2110</b>	1 Each
	15 with 10m SafeGuard	0.25	<b>26096-1301</b>	1 Each
	30	0.25	<b>26096-1420</b>	1 Each
		0.5	<b>26096-2230</b>	1 Each
		1.0	<b>26096-2960</b>	1 Each
	30 with 5m SafeGuard	0.25	<b>26096-1425</b>	1 Each
		0.5	<b>26096-2235</b>	1 Each
	30 with 10m SafeGuard	0.25	<b>26096-1421</b>	1 Each
		60	0.25	<b>26096-1540</b>
	1.0		<b>26096-3080</b>	1 Each
0.32	15	0.25	<b>26096-1310</b>	1 Each
		0.25	<b>26096-1430</b>	1 Each
	30	0.5	<b>26096-2240</b>	1 Each
		1.0	<b>26096-2970</b>	1 Each
0.53	30	1.5	<b>26096-3360</b>	1 Each

### Applications:

- GC-MS applications using ion-trap systems
- Polycyclic aromatics
- Hydrocarbons including chlorinated hydrocarbons
- Phthalates
- Phenols
- Amines
- Organophosphate

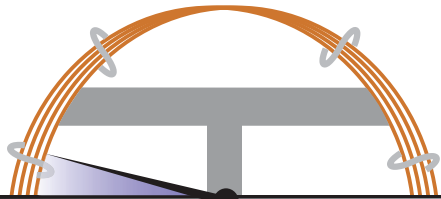
### Similar to:

- DB-5ms Ultra Inert
- VF-5ms
- CP-Sil 8 Low-Bleed/MS
- Rxi-5SiIMS
- BPX5
- ZB-5ms
- Optima-5MS
- SLB-5

## TraceGOLD TG-5MS AMINE GC Columns

Analysis of ppm levels of amines without column priming

- Low polarity phase, base optimized
- Tubing surface is chemically altered to reduce tailing of active basic compounds
- Also allows analysis of neutral or weakly acidic compounds (e.g. phenols) and compounds susceptible to hydrogen bonding
- Low bleed at maximum operating temperature



NON-POLAR	POLAR
Phase:	Modified 5% diphenyl / 95% dimethyl polysiloxane for basic compounds
Max. Temps.:	300°C / 315°C
USP Listing:	N/A

### TraceGOLD TG-5MS AMINE GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.25	<b>26097-1300</b>	1 Each
		1.0	<b>26097-2840</b>	1 Each
		0.25	<b>26097-1420</b>	1 Each
		0.5	<b>26097-2230</b>	1 Each
		1.0	<b>26097-2960</b>	1 Each
0.32	30	1.0	<b>26097-2970</b>	1 Each
0.53	15	1.0	<b>26097-2860</b>	1 Each
	30	1.0	<b>26097-2980</b>	1 Each
		3.0	<b>26097-3960</b>	1 Each

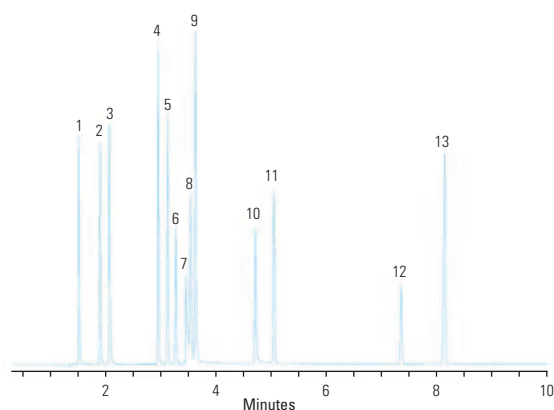
### Applications:

- Amines and other basic compounds, including alkylamines, diamines, triamines, ethanolamines
- Nitrogen-containing heterocyclics

### Similar to:

- Rtx-5 Amine

### Amines and phenols



#### TG-5MS Amine 30m x 0.32mm x 1.0µm

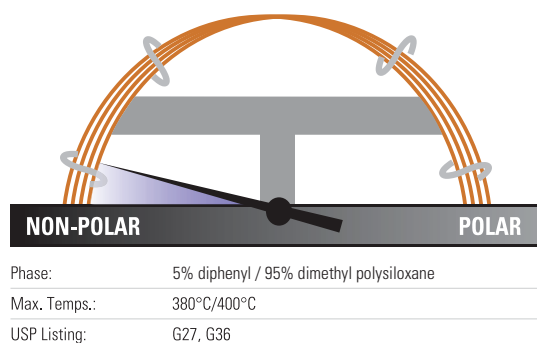
Temperature:	120°C to 220°C at 10°C/minute
Detector Type:	FID
Carrier Gas:	Hydrogen
Flow Rate:	40cm/min
Injection Volume:	1.0µL
Injection Mode:	Split 25:1, 300°C

- |                       |                           |
|-----------------------|---------------------------|
| 1. diethylamine       | 8. octylamine             |
| 2. pyridine           | 9. 1-methyl-2-pyrrolidone |
| 3. morpholine         | 10. 2-nitrophenol         |
| 4. phenol             | 11. 2,6-dimethylaniline   |
| 5. aniline            | 12. nicotine              |
| 6. 2-chlorophenol     | 13. 2-nitroaniline        |
| 7. diethylenetriamine |                           |

## TraceGOLD TG-5HT GC Columns

Offers extended operation up to 400°C, ideal for high temperature extended GC applications

- Low polarity
- Lower bleed and better inertness than comparable high-temperature columns
- Special design of fused silica tubing extends column lifetime by up to 40%



### TraceGOLD TG-5HT GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.1	<b>26095-0350</b>	1 Each
		0.25	<b>26095-1300</b>	1 Each
	30	0.1	<b>26095-0470</b>	1 Each
		0.25	<b>26095-1420</b>	1 Each
0.32	15	0.1	<b>26095-0360</b>	1 Each
	30	0.1	<b>26095-0480</b>	1 Each
		0.25	<b>26095-1430</b>	1 Each
0.53	10	0.15	<b>26095-1640</b>	1 Each
	30	0.15	<b>26095-0620</b>	1 Each

### Applications:

- Phenols
- Residual solvents
- Solvents
- Semivolatiles
- Pesticides
- PCBs
- Solvent impurities

### Similar to:

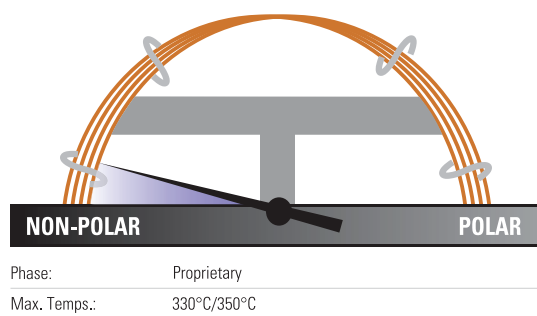
- Rxi-5HT
- BP-5HT
- VF-5HT
- ZB-5HT



## TraceGOLD TG-SQC GC Columns

Ensure the quality of a Thermo Scientific instrument when installed on site

- Optimized for system qualification tests for new GC-MS installations or during service/maintenance of an existing instrument
- We recommend reserving this column for benchmark testing only



### TraceGOLD TG-SQC GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.25	<b>26070-1300</b>	1 Each
	30	0.25	<b>26070-1420</b>	1 Each

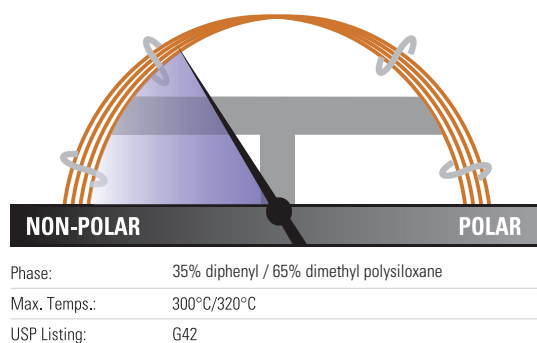
### Applications:

- System Qualification Tests (Thermo Scientific GC-MS)

## TraceGOLD TG-35MS GC Columns

Higher phenyl content for useful elution order and retention time changes

- Mid-polarity phase
- Equivalent to USP G42 phase



### TraceGOLD TG-35MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.25	<b>26094-1300</b>	1 Each
		0.25	<b>26094-1420</b>	1 Each
		0.5	<b>26094-2230</b>	1 Each
0.32	15	0.25	<b>26094-1310</b>	1 Each
		0.5	<b>26094-2120</b>	1 Each
		0.25	<b>26094-1430</b>	1 Each
	30	0.5	<b>26094-2240</b>	1 Each
		0.5	<b>26094-2130</b>	1 Each
0.53	15	1.0	<b>26094-2860</b>	1 Each
		1.5	<b>26094-3340</b>	1 Each
		0.5	<b>26094-2250</b>	1 Each
	30	1.0	<b>26094-2980</b>	1 Each
		1.5	<b>26094-3360</b>	1 Each

### Applications:

- Organochlorine pesticides and herbicides
- Pharmaceuticals
- PCB congeners
- Aroclor mixes
- Sterols
- Rosin acids
- Phthalate esters

### Similar to:

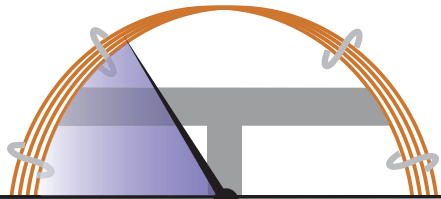
- Rtx-35
- BP-35
- HP-35
- SPB-35
- SPB-608



## TraceGOLD TG-35MS AMINE GC Columns

Chemically altered tubing surface reduces tailing and eliminates the need for column priming

- Mid-polarity phase, base optimized
- Developed for analysis of active basic compounds without derivatization
- Also allows analysis of neutral compounds and adsorptive compounds with oxygen groups susceptible to hydrogen bonding
- Low bleed at maximum operating temperature



NON-POLAR	POLAR
Phase:	Modified 35% diphenyl / 65% dimethylpolysiloxane for basic compounds
Max. Temps.:	220°C
USP Listing:	N/A

### TraceGOLD TG-35MS AMINE GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	1.0	<b>26092-2840</b>	1 Each
	30	0.5	<b>26092-2230</b>	1 Each
		1.0	<b>26092-2960</b>	1 Each
0.32	15	1.0	<b>26092-2850</b>	1 Each
	30	1.0	<b>26092-2970</b>	1 Each
		1.5	<b>26092-3350</b>	1 Each
		3.0	<b>26092-3960</b>	1 Each
0.53	15	1.0	<b>26092-2860</b>	1 Each
	30	1.0	<b>26092-2980</b>	1 Each
			3.0	<b>26092-3960</b>

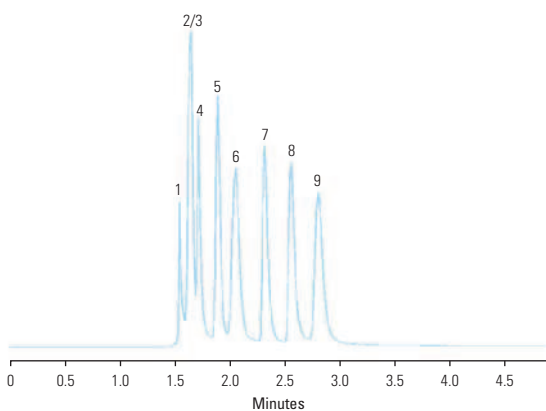
### Applications:

- Amines including alkylamines, diamines, triamines and ethanolamines
- Nitrogen-containing heterocyclics

### Similar to:

- Rtx-35 Amine

### Primary amines



#### TG-35MS AMINE 30m x 0.53mm x 1.0µm

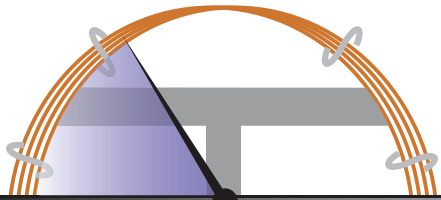
Temperature:	35°C (5 minute hold) Isothermal
Detector Type:	FID
Carrier Gas:	He
Flow Rate:	35cm/sec
Injection Volume:	1.0µL
Injection Mode:	Split (10:1), 250°C

1. methylamine	6. tert-butylamine
2. dimethylamine	7. n-propylamine
3. trimethylamine	8. diethylamine
4. ethylamine	9. sec-butylamine
5. isopropylamine	

## TraceGOLD TG-1301MS GC Columns

Low bleed, excellent reproducibility and column-to-column consistency even with sensitive detectors like ECD and MS

- Mid-polarity phase
- Long lifetime
- Excellent inertness
- Equivalent to USP G43 phase



Phase:	6% cyanopropyl phenyl / 94% dimethyl polysiloxane
Max. Temps.:	260°C/280°C
USP Listing:	G43

### TraceGOLD TG-1301MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.25	<b>26091-1300</b>	1 Each
		0.5	<b>26091-2110</b>	1 Each
	30	0.25	<b>26091-1420</b>	1 Each
		0.5	<b>26091-2230</b>	1 Each
		1.0	<b>26091-2960</b>	1 Each
	60	0.25	<b>26091-1540</b>	1 Each
1.0		<b>26091-3080</b>	1 Each	
0.32	15	0.25	<b>26091-1310</b>	1 Each
		0.25	<b>26091-1430</b>	1 Each
	30	0.5	<b>26091-2240</b>	1 Each
		1.0	<b>26091-2970</b>	1 Each
		1.5	<b>26091-3350</b>	1 Each
		1.8	<b>26091-3390</b>	1 Each
		0.5	<b>26091-2360</b>	1 Each
	60	1.0	<b>26091-3090</b>	1 Each
		1.8	<b>26091-3410</b>	1 Each
0.53	30	0.25	<b>26091-1440</b>	1 Each
		1.0	<b>26091-2980</b>	1 Each
		1.5	<b>26091-3360</b>	1 Each
		3.0	<b>26091-3960</b>	1 Each
	60	0.25	<b>26091-1560</b>	1 Each
		0.5	<b>26091-2370</b>	1 Each
		3.0	<b>26091-4080</b>	1 Each

### Applications:

- Alcohols
- Volatile organics
- Oxygenates
- Residual solvents

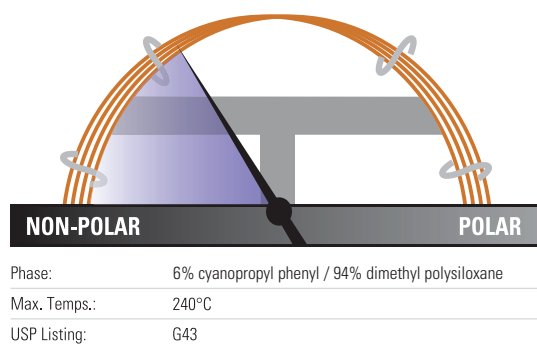
### Similar to:

- Rtx-1301
- DB-1301
- BP-624
- HP-1301
- HP-624
- SPB-1301
- SPB-624
- VP-1301
- BF-624ms
- CP-1301
- CP-Select 624 CB

## TraceGOLD TG-624 GC Columns

Offers 90+% resolution of the first six gases in EPA Method 8260 and EPA Method 524.2 for volatile organics analysis

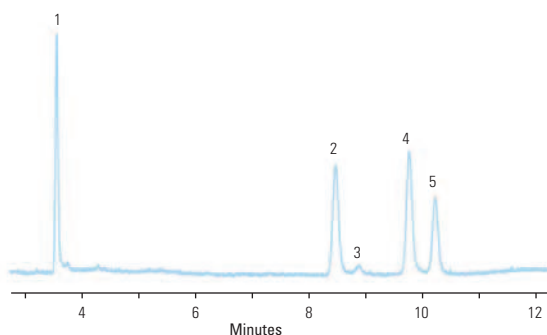
- Mid-polarity phase
- Ideal for EPA methods 624 and 608
- Allows resolution of 2-nitropropane from 1,1-dichloropropanone under EPA Method 524.2 revision IV



### TraceGOLD TG-624 GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.18	20	1.0	<b>26085-4950</b>	1 Each
	40	1.0	<b>26085-4960</b>	1 Each
0.25	30	1.4	<b>26085-3320</b>	1 Each
	60	1.4	<b>26085-3330</b>	1 Each
0.32	30	1.8	<b>26085-3390</b>	1 Each
	60	1.8	<b>26085-3410</b>	1 Each
0.53	30	3.0	<b>26085-3960</b>	1 Each
	60	3.0	<b>26085-4080</b>	1 Each
	75	3.0	<b>26085-4900</b>	1 Each
	105	3.0	<b>26085-4090</b>	1 Each

### Residual solvents class 1



#### TG-624 30m x 0.32mm x 1.80µm

Temperature: 40°C (20 minute hold) to 240°C at 10°C/min (20 minute hold)

Detector Type: FID

Carrier Gas: He

Flow Rate: 2.15mL/min

Injection Volume: 1µL

Injection Mode: Headspace, Split (1:5), 140°C

- 1,1-dichloroethane
- 1,1,1-trichloroethane
- carbon tetrachloride
- benzene
- 1,2-dichloroethane

### Applications:

- Residual Solvents
- Volatile Organic Compounds
- Alcohols
- Oxygenates

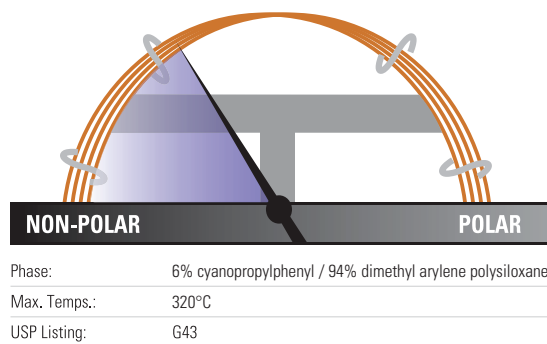
### Similar to:

- DB-1301
- DB-624
- HP-1301
- HP-624
- SPB-1301
- SPB-624
- VF-1301
- VF-624ms
- CP-1301
- CP-Select 624 CB
- Rtx-624
- BP-624
- ZB-624
- Optima-1301
- Optima-624
- AT-624
- 007-1301

## TraceGOLD TG-624SiIMS GC Columns

High thermal stability column ideal for volatile organics analysis

- Mid-polarity phase
- High thermal stability – maximum temperatures up to 320°C
- Highly inert – excellent peak shape for a wide range of compounds



### TraceGOLD TG-624SiIMS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.18	20	1.0	<b>26059-4950</b>	1 Each
0.25	30	1.4	<b>26059-3320</b>	1 Each
	60	1.4	<b>26059-3330</b>	1 Each
0.32	30	1.8	<b>26059-3390</b>	1 Each
	60	1.8	<b>26059-3410</b>	1 Each
0.53	30	3.0	<b>26059-3960</b>	1 Each
	60	3.0	<b>26059-4080</b>	1 Each
	75	3.0	<b>26059-4900</b>	1 Each
	105	3.0	<b>26059-4090</b>	1 Each

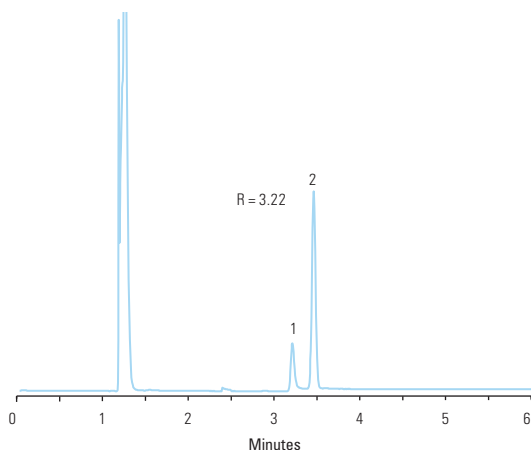
#### Applications:

- Residual Solvents
- Volatile Organic Compounds
- Alcohols
- Oxygenates

#### Similar to:

- DB-624 Ultra Inert
- VF-624ms
- CP-Select 624 CB
- ZB-624

### Acetonitrile and Dichloromethane



#### TG-624SiIMS 30m x 0.32mm x 1.8µm

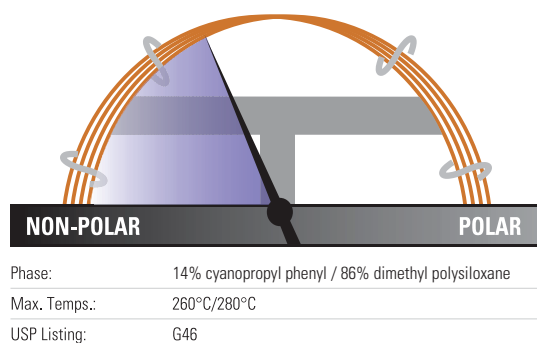
Temperature: 40°C for 6 minutes  
 Detector Type: MS (ISQ); m/z 40,41 for Acetonitrile (1), m/z 49, 84 for Dichloromethane (2)  
 Carrier Gas: Helium  
 Flow Rate: 1.5 mL/min  
 Injection Volume: 500µL  
 Injection Mode: Headspace, Split (20:1) 220°C

1. Acetonitrile
2. Dichloromethane

## TraceGOLD TG-1701MS GC Columns

Feature a mix of cyano and phenyl groups for increased polarity and a different elution order relative to less polar columns

- Mid-polarity phase, 14% cyanopropylphenyl methylpolysiloxane
- Fully characterized for long-term reproducibility, column-to-column consistency and low bleed
- Optimal for confirmation analysis
- Equivalent to USP G46 phase



### TraceGOLD TG-1701MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity		
0.10	10	0.1	<b>26090-0200</b>	1 Each		
		0.25	<b>26090-1300</b>	1 Each		
0.25	30	0.25	<b>26090-1420</b>	1 Each		
		0.5	<b>26090-2230</b>	1 Each		
		1.0	<b>26090-2960</b>	1 Each		
	60	0.25	<b>26090-1540</b>	1 Each		
		1.0	<b>26090-3080</b>	1 Each		
		0.32	15	0.25	<b>26090-1310</b>	1 Each
0.25	<b>26090-1430</b>	1 Each				
0.32	30	0.5	<b>26090-2240</b>	1 Each		
		1.0	<b>26090-2970</b>	1 Each		
		0.25	<b>26090-1550</b>	1 Each		
	60	1.0	<b>26090-3090</b>	1 Each		
		0.53	15	0.25	<b>26090-1320</b>	1 Each
		0.25		<b>26090-1440</b>	1 Each	
0.53	30	0.5	<b>26090-2250</b>	1 Each		
		1.0	<b>26090-2980</b>	1 Each		
		3.0	<b>26090-3960</b>	1 Each		

### Applications:

- Alcohols
- Pesticides
- Oxygenates
- PCB congeners
- Aroclor mixes

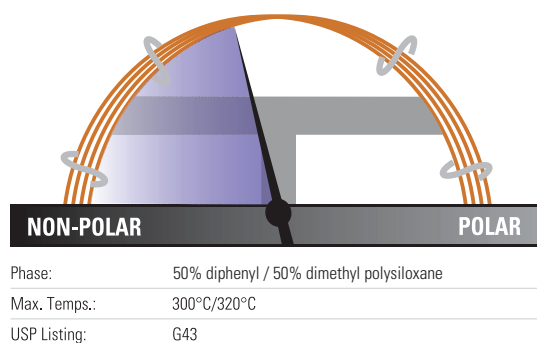
### Similar to:

- Rtx-1701
- DB-1701
- HP-1701
- SPB-1701
- VF-1701
- CP-Sil 19 CB

## TraceGOLD TG-17MS GC Columns

Particularly suited to GC-MS applications that require more polarity than a 5% phenyl phase

- Mid-polarity phase
- Ideal for confirmational analysis
- Excellent inertness for active compounds such as pesticides
- Very low bleed ideal for analysis by GC-MS



### TraceGOLD TG-17MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.10	10	0.1	<b>26089-0200</b>	1 Each
0.25	15	0.25	<b>26089-1300</b>	1 Each
		0.25	<b>26089-1420</b>	1 Each
		0.5	<b>26089-2230</b>	1 Each
		1.0	<b>26089-2960</b>	1 Each
		0.25	<b>26089-1540</b>	1 Each
0.32	15	0.25	<b>26089-1310</b>	1 Each
		0.25	<b>26089-1430</b>	1 Each
		0.5	<b>26089-2240</b>	1 Each
		1.0	<b>26089-2970</b>	1 Each
0.53	30	0.25	<b>26089-1440</b>	1 Each
		0.5	<b>26089-2250</b>	1 Each
		1.0	<b>26089-2980</b>	1 Each
		1.5	<b>26089-3360</b>	1 Each
		0.53	30	1.5

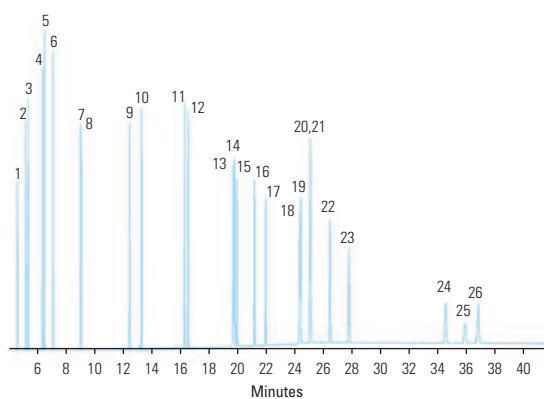
### Applications:

- Pesticides and herbicides
- Rosin acids
- Phthalate esters
- Triglycerides
- Sterols

### Similar to:

- Rxi-17
- DB-17
- DB-608
- VF-17ms
- CP-Sil 24 CB

### Polycyclic aromatic hydrocarbons



#### TG-17MS 30m x 0.25mm x 0.25µm

Temperature: 90°C (1.0 minute hold) to 215°C (0.5 minute hold) at 25°C/minute to 235°C at 4°C/minute to 280°C/minute at 15°C/minute to 320°C (20 minute hold) at 4°C/minute

Detector Type: MS  
Carrier Gas: He  
Flow Rate: 1.2mL/min  
Injection Volume: 1.0µL  
Injection Mode: Splitless, 300°C

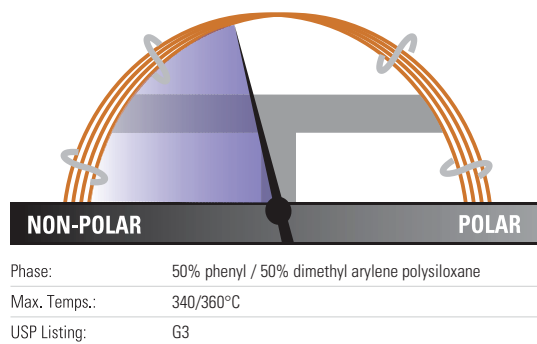
- |                          |                              |
|--------------------------|------------------------------|
| 1. naphthalene           | 15. benzo(j)fluoranthene     |
| 2. 1-methylnaphthalene   | 16. benzo(a)pyrene           |
| 3. 2-methylnaphthalene   | 17. 3-methylcholanthrene     |
| 4. acenaphthylene        | 18. dibenzo(a,h)acridine     |
| 5. acenaphthene          | 19. dibenzo(a,j)acridine     |
| 6. fluorene              | 20. indeno(1,2,3-cd)pyrene   |
| 7. phenanthrene          | 21. dibenzo(a,h)anthracene   |
| 8. anthracene            | 22. benzo(ghi)perylene       |
| 9. fluoranthene          | 23. 7H-dibenzo(c,g)carbazole |
| 10. pyrene               | 24. dibenzo(a,e)pyrene       |
| 11. benzo(a)anthracene   | 25. dibenzo(a,i)pyrene       |
| 12. chrysene             | 26. dibenzo(a,h)pyrene       |
| 13. benzo(b)fluoranthene |                              |
| 14. benzo(k)fluoranthene |                              |



## TraceGOLD TG-17SiIMS GC Columns

Excellent separation of active environmental compounds

- Mid-polarity phase
- High thermal stability – maximum temperatures up to 340/360°C
- Excellent inertness for active environmental compounds such as PAHs



### TraceGOLD TG-17SiIMS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.15	10	0.15	<b>26072-2750</b>	1 Each
	20	0.15	<b>26072-2760</b>	1 Each
0.18	20	0.18	<b>26072-5780</b>	1 Each
		0.36	<b>26072-1380</b>	1 Each
0.25	15	0.25	<b>26072-1300</b>	1 Each
	30	0.25	<b>26072-1420</b>	1 Each
0.32	15	0.25	<b>26072-1310</b>	1 Each
	30	0.25	<b>26072-1430</b>	1 Each

### Applications:

- PAHs
- Pesticides and herbicides
- Phthalate esters
- Triglycerides

### Similar to:

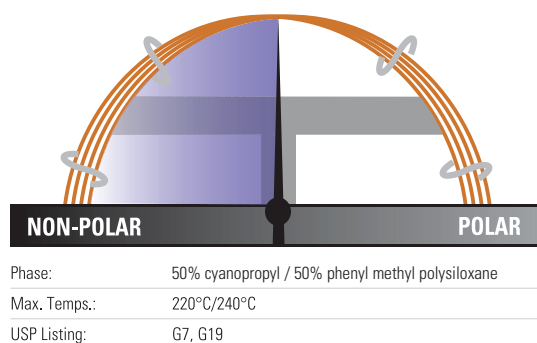
- DB-17ms
- VF-17ms
- CP-Sil 24 CB
- ZB-50
- BPX-50



## TraceGOLD TG-225MS GC Columns

Offers better thermal stability than comparable columns

- Polar phase
- Innovative deactivation process for siloxane reduces tailing and improves efficiency over comparable columns
- Equivalent to USP G7, G19 phases



### TraceGOLD TG-225MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.25	<b>26083-1300</b>	1 Each
	30	0.25	<b>26083-1420</b>	1 Each
	60	0.25	<b>26083-1540</b>	1 Each
0.32	30	0.25	<b>26083-1430</b>	1 Each
		0.5	<b>26083-2240</b>	1 Each

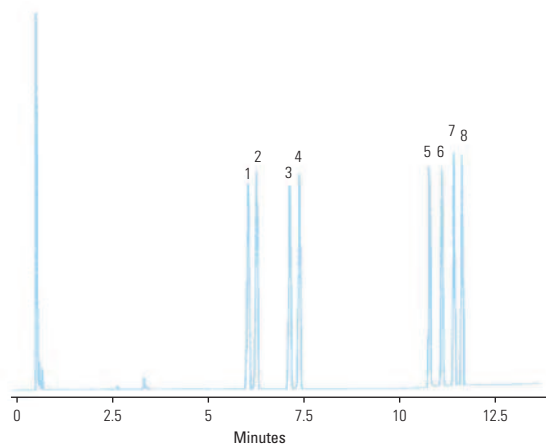
### Applications:

- FAMES
- Carbohydrates
- Sterols
- Flavor compounds

### Similar to:

- Rtx-225
- DB-225
- HP-225
- SPB-225

### Sugars



#### TG-225MS 15m x 0.25mm x 0.25µm

Temperature: 190°C (5 minute hold) to 250°C at 8°C/min (5 minute hold)

Detector Type: FID

Carrier Gas: Hydrogen

Flow Rate: 45cm/sec

Injection Volume: 0.5µL

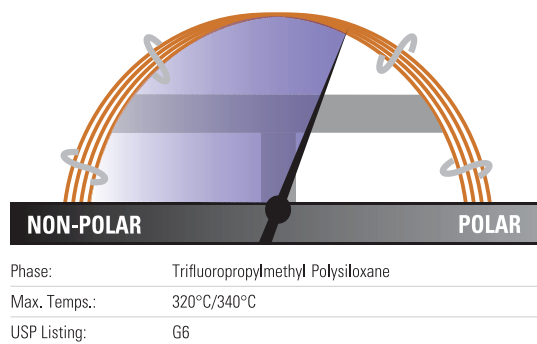
Injection Mode: Split (35:1), 260°C

- |               |               |
|---------------|---------------|
| 1. rhamnitol  | 5. mannitol   |
| 2. fucitol    | 6. galactitol |
| 3. ribitol    | 7. glucitol   |
| 4. arabinitol | 8. inositol   |

## TraceGOLD TG-200MS GC Columns

Exceptionally inert mid-polarity columns with selectivity and elution order optimized for difficult separations

- Polar phase, trifluoropropyl methyl polysiloxane solid phase resolves compounds that phenyl and cyano phases cannot
- Outstanding thermal stability and low bleed
- Suitable for use with sensitive detectors including ECD, NPD and MS
- Confirmation column in combination with another GC column



### TraceGOLD TG-200MS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.15	10	0.15	<b>26084-2750</b>	1 Each
	20	0.15	<b>26084-2760</b>	1 Each
0.25	30	0.25	<b>26084-1420</b>	1 Each
		0.5	<b>26084-2230</b>	1 Each
		1.0	<b>26084-2960</b>	1 Each
0.32	30	0.25	<b>26084-1430</b>	1 Each
		0.5	<b>26084-2240</b>	1 Each
		1.0	<b>26084-2970</b>	1 Each

### Applications:

- Solvents
- Fluorocarbons
- Alcohols and ketones
- Silanes
- Glycols

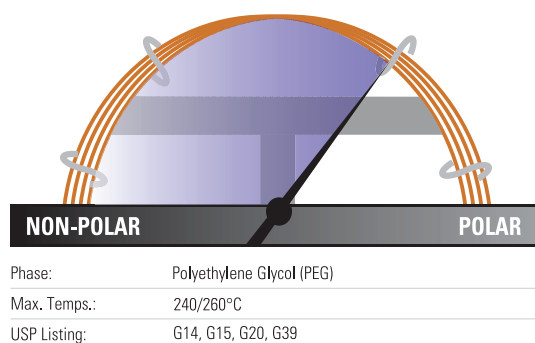
### Similar to:

- Rtx-200MS
- DB-200
- DB-210

## TraceGOLD TG-WaxMS GC Columns

Manufactured for better column-to-column reproducibility

- Polar phase, polyethylene glycol
- Polar-deactivated surface tightly binds polymer for excellent thermal stability
- Resists oxidative damage, damage from strongly acidic or basic volatiles better than silicone solid phases



### TraceGOLD TG-WaxMS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity	
0.0	10	0.1	<b>26088-0200</b>	1 Each	
0.15	10	0.15	<b>26088-2750</b>	1 Each	
		0.15	<b>26088-2760</b>	1 Each	
		0.15	<b>26088-2940</b>	1 Each	
0.18	20	0.18	<b>26088-5780</b>	1 Each	
0.25	15	0.25	<b>26088-1300</b>	1 Each	
		0.25	<b>26088-1420</b>	1 Each	
		0.5	<b>26088-2230</b>	1 Each	
	30 with 5m SafeGuard	0.25	<b>26088-1421</b>	1 Each	
		0.25	<b>26088-1540</b>	1 Each	
		0.5	<b>26088-2350</b>	1 Each	
0.32	15	0.25	<b>26088-1310</b>	1 Each	
		0.5	<b>26088-2120</b>	1 Each	
		1.0	<b>26088-2850</b>	1 Each	
		30	0.25	<b>26088-1430</b>	1 Each
			0.5	<b>26088-2240</b>	1 Each
			1.0	<b>26088-2970</b>	1 Each
	30m with 5m SafeGuard	0.25	<b>26088-1435</b>	1 Each	
		60	0.25	<b>26088-1550</b>	1 Each
			0.5	<b>26088-2360</b>	1 Each
	1.0		<b>26088-3090</b>	1 Each	
	0.53	15	0.5	<b>26088-2130</b>	1 Each
			1.0	<b>26088-2860</b>	1 Each
30			0.25	<b>26088-1440</b>	1 Each
			0.5	<b>26088-2250</b>	1 Each
		1.0	<b>26088-2980</b>	1 Each	
		1.5	<b>26088-3360</b>	1 Each	
60		0.25	<b>26088-1560</b>	1 Each	
		0.5	<b>26088-2370</b>	1 Each	
		1.0	<b>26088-3100</b>	1 Each	

### Applications:

- FAMES
- Flavor compounds and essential oils
- Solvents
- Xylene isomers
- EPA Method 603 for Acrolein/ Acrylonitrile

### Similar to:

- DB-WAX
- DB-WAXetr
- HP-Wax
- HP-Innowax
- Supelcowax 10
- CP-Wax 52 CB
- Stabilwax
- Rtx-Wax
- BP20
- ZB-Wax
- Optima Wax
- AT-Wax

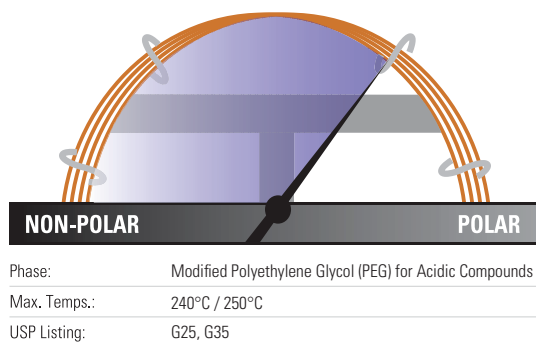
### TraceGOLD TG-WaxMT Metal GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	30	0.25	<b>26M88-1420</b>	1 Each
		0.5	<b>26M88-2230</b>	1 Each
		60	<b>26M88-1540</b>	1 Each
0.53	30	0.25	<b>26M88-1440</b>	1 Each
		0.5	<b>26M88-2250</b>	1 Each
		1.0	<b>26M88-2880</b>	1 Each
		1.5	<b>26M88-3360</b>	1 Each

## TraceGOLD TG-WaxMS A GC Columns

Acidic functionality in the polymer structure allows analysis of acidic compounds without derivatization

- Polar phase, acid-deactivated polyethylene glycol
- Resists oxidative damage and adsorption of acids
- Excellent peak shapes for high MW acids
- Equivalent to USP G25, G35 phases



### TraceGOLD TG-WaxMS A GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	15	0.25	<b>26087-1300</b>	1 Each
		0.25	<b>26087-1420</b>	1 Each
	60	0.5	<b>26087-2230</b>	1 Each
		0.25	<b>26087-1540</b>	1 Each
		0.5	<b>26087-2350</b>	1 Each
		0.5	<b>26087-2350</b>	1 Each
0.32	15	0.25	<b>26087-1310</b>	1 Each
		0.5	<b>26087-2120</b>	1 Each
	30	0.25	<b>26087-1430</b>	1 Each
		0.5	<b>26087-2240</b>	1 Each
		1.0	<b>26087-2970</b>	1 Each
		0.25	<b>26087-1550</b>	1 Each
	60	0.5	<b>26087-2360</b>	1 Each
		0.5	<b>26087-2130</b>	1 Each
1.0		<b>26087-2860</b>	1 Each	
0.25		<b>26087-1440</b>	1 Each	
0.5		<b>26087-2250</b>	1 Each	
1.0		<b>26087-2980</b>	1 Each	

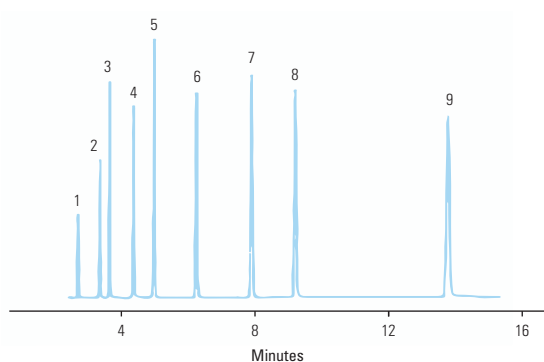
### Applications:

- Organic acids
- Free fatty acids
- Alcohols

### Similar to:

- DB-FFAP
- HP-FFAP
- NUKOL
- OV-351
- CP-Wax 58 CB
- FFAP
- Stabilwax-DA
- BP-21
- Optima FFAP

### Free fatty acids



#### TG-WaxMS A 30m x 0.25mm x 0.25µm

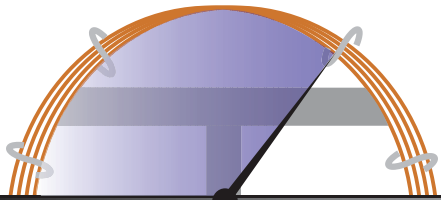
Temperature:	145°C Isothermal
Detector Type:	FID
Carrier Gas:	Hydrogen
Flow Rate:	40cm/sec
Injection Volume:	1.0µL
Injection Mode:	Split (50:1), 250°C

- |                    |                    |
|--------------------|--------------------|
| 1. acetic acid     | 7. isocaproic acid |
| 2. propionic acid  | 8. caproic acid    |
| 3. isobutyric acid | 9. heptanoic acid  |
| 4. n-butyric acid  |                    |
| 5. isovaleric acid |                    |
| 6. n-valeric acid  |                    |

## TraceGOLD TG-WaxMS B GC Columns

Base deactivation allows analysis of basic analytes without derivatization or column priming

- Polar phase, base deactivated polyethylene glycol
- Reduced absorption and improved responsiveness for basic compounds
- Not suitable for use with water or alcohols



Phase:	Modified Polyethylene Glycol (PEG) for Basic Compounds
Max. Temps.:	200°C/220°C
USP Listing:	N/A

### TraceGOLD TG-WaxMS B GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	30	0.25	<b>26086-1420</b>	1 Each
		0.5	<b>26086-2230</b>	1 Each
0.32	30	0.25	<b>26086-1430</b>	1 Each
		0.5	<b>26086-2240</b>	1 Each
		1.0	<b>26086-2970</b>	1 Each
		1.0	<b>26086-3090</b>	1 Each
0.53	30	0.5	<b>26086-2250</b>	1 Each
		1.0	<b>26086-2980</b>	1 Each

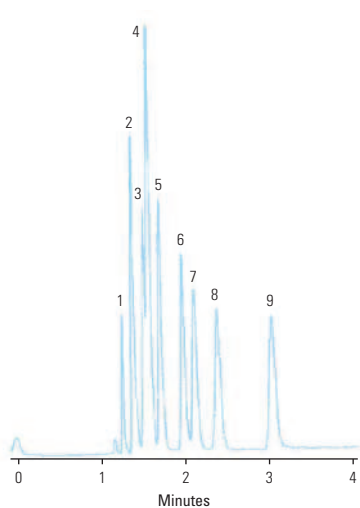
### Applications:

- Amines
- Alkylamines
- Diamines
- Other basic compounds

### Similar to:

- CAM
- Carbowax Amine
- CP Wax51
- Stabilwax-DB

### Amines



#### TG-WaxMS B 30m x 0.53mm x 1.0µm

Temperature:	45°C Isothermal
Detector Type:	FID
Carrier Gas:	Hydrogen
Flow Rate:	40cm/sec
Injection Volume:	1µL
Injection Mode:	Direct Injection, 250°C

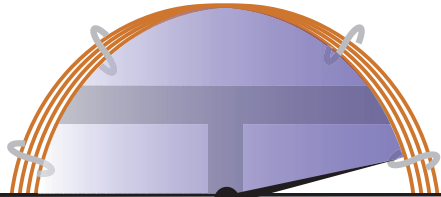
- |                   |                    |
|-------------------|--------------------|
| 1. trimethylamine | 7. tert-butylamine |
| 2. dimethylamine  | 8. diethylamine    |
| 3. ethylamine     | 9. sec-butylamine  |
| 4. methylamine    |                    |
| 5. isopropylamine |                    |
| 6. n-propylamine  |                    |



## TraceGOLD TG-POLAR GC Columns

Specifically designed polymer and surface treatment overcome traditional problems with high-polarity columns

- Highly polar phase
- Strong dipole moment and high selectivity for cis/trans compounds or compounds with conjugated double bonds
- Equivalent to USP G8 and G48



NON-POLAR	POLAR
Phase:	90% biscyanopropyl / 10% cyanopropyl phenyl polysiloxane
Max. Temps.:	260°C/275°C
USP Listing:	G8, G48

### TraceGOLD TG-POLAR GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.25	30	0.1	<b>26082-0470</b>	1 Each
		0.2	<b>26082-5010</b>	1 Each
	60	0.1	<b>26082-0590</b>	1 Each
		0.2	<b>26082-5020</b>	1 Each
	105	0.1	<b>26082-5000</b>	1 Each
		0.2	<b>26082-5030</b>	1 Each
0.32	30	0.2	<b>26082-5040</b>	1 Each
	60	0.2	<b>26082-5050</b>	1 Each
0.53	30	0.1	<b>26082-0490</b>	1 Each
		0.2	<b>26082-5070</b>	1 Each
	60	0.1	<b>26082-0610</b>	1 Each
		0.2	<b>26082-5080</b>	1 Each

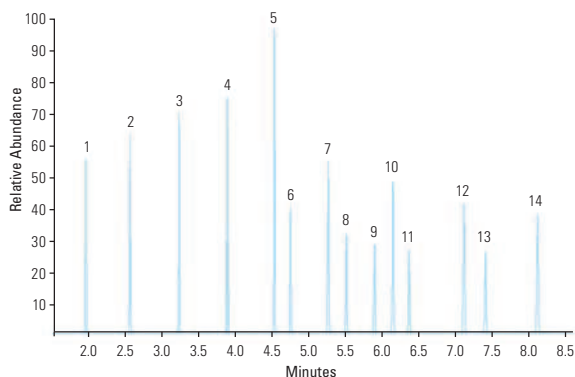
### Applications:

- Cis/Trans FAMES
- Dioxins

### Similar to:

- DB-23
- HP-23
- Rtx-2330
- SP-2330
- SP-2380
- SPB-2560
- HP-88
- Silar 10c
- CP-Sil 88 FAME
- CP-Sil 88
- BPX 70
- BPX 90

### FAMES C8-C24



#### TG-POLAR 30m x 0.25mm x 0.2µm

Temperature: 100°C (0.5 minute hold) to 195°C at 25°C/minute (1 minute hold) to 250°C at 10°C/minute (3 minute hold)

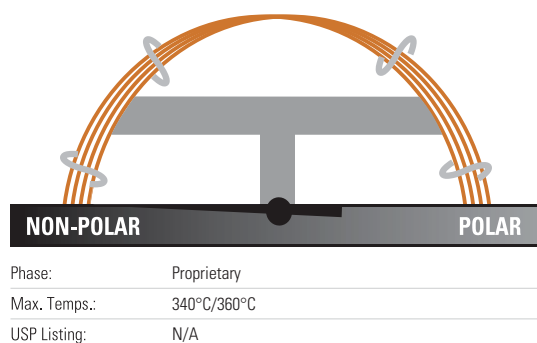
Detector Type: MS  
Carrier Gas: He  
Flow Rate: 1.2mL/min  
Injection Volume: 0.1µL  
Injection Mode: Split (100:1), 250°C

- |                        |                               |
|------------------------|-------------------------------|
| 1. Methyl octanoate    | 10. Methyl linolenate         |
| 2. Methyl decanoate    | 11. Methyl arachidate         |
| 3. Methyl decanoate    | 12. Methyl behenate           |
| 4. Methyl myristate    | 13. Methyl cis-13-docosanoate |
| 5. Methyl palmitate    | 14. Methyl tetracosanoate     |
| 6. Methyl palmitoleate |                               |
| 7. Methyl stearate     |                               |
| 8. Methyl oleate       |                               |
| 9. Methyl linoleate    |                               |

## TraceGOLD TG-XLBMS GC Columns

General purpose columns exhibiting extremely low bleed

- Low polarity phase, proprietary
- Low bleed for excellent signal-to-noise ratio, sensitivity and mass spectral integrity
- Ideal for analysis of active, high molecular weight compounds with sensitive GC-MS systems



### TraceGOLD TG-XLBMS GC Columns

ID (mm)	Length (m)	Film Thickness (µm)	Cat. No.	Quantity
0.18	20	0.18	<b>26079-5780</b>	1 Each
0.25	15	0.1	<b>26079-0350</b>	1 Each
		0.25	<b>26079-1300</b>	1 Each
		0.1	<b>26079-0470</b>	1 Each
		0.25	<b>26079-1420</b>	1 Each
		0.5	<b>26079-2230</b>	1 Each
		0.25	<b>26079-1540</b>	1 Each
0.32	30	0.1	<b>26079-0480</b>	1 Each
		0.25	<b>26079-1430</b>	1 Each
		0.5	<b>26079-2240</b>	1 Each
		1.0	<b>26079-2970</b>	1 Each

### Applications

- Pesticides
- PCB congeners
- PAHs
- Aroclor mixes

### Similar to:

- Rxi-XLB
- DB-XLB
- VF-Xms

### Semi-Volatile Drinking Water Application Kit

Description	Cat. No.	Quantity
Semi-Volatile Drinking Water Application Kit	<b>60181-736</b>	1 Each
Containing the following:		
TraceGOLD TG-XLBMS GC Column 30m x 0.25mm x 0.25µm	<b>26079-1420</b>	1 Each
BTO Septa 17mm Diameter	<b>31303211</b>	50 Pack
S/SL Injector – Split/Splitless Liner, 5mm ID x 8mm OD x 105mm Length	<b>45350033</b>	5 Pack
S/SL Injector – Silver Seals	<b>29033629</b>	10 Pack
S/SL Injector – Graphite Liner Seals	<b>29033406</b>	10 Pack
S/SL Injector – Graphite Ferrules for 0.25mm ID Column	<b>29053488</b>	10 Pack
MS Interface – Graphite/Vespel Ferrules for 0.25mm ID Column	<b>29033496</b>	10 Pack
2mL Screw Top Vials, Amber Glass	<b>60180-567</b>	100 Pack
Blue Caps With PTFE/Red Rubber Seals	<b>60180-569</b>	100 Pack
5µL Fixed Needle Syringe, 50mm Length, 26 Gauge, Cone Needle	<b>36500505</b>	1 Each