The Teknokroma New range of Diskobolus™ Septa

diskobolus septa
by Teknokroma™

Septum is the most general source of contaminants in the injection port. The baseline noise or the appearance of ghost peaks in the chromatogram can be a consequence of the septum bleed or of the samples of former injections that have been adsorbed on the septum surface.

Teknokroma presents the new range of **diskobolus™** septa that have been specially designed and prepared to work at high temperatures, with low bleed, and a better baseline.

General observations to consider in the Septum election:

- Injector temperature
- Column temperature (isothermal or programmed)
- Detector sensitivity

Septa quickly deteriore when the injector temperature increases, and consequently the level of bleed may also increase.

These peaks coming from the degradation of the silicone of the septum, can be reduced with the gas flow of the septum purge, with the Split injection or using the lowest possible temperature in the injector.

The existence of rare peaks - called "ghost peaks", generally takes place during the temperature programme where volatile materials of the septum accumulate at the column head during the period of cooling.

When the column warms up again, in the following temperature programme, the accumulated volatile materials elute, ghost peaks and a baseline deviation appears, or a combination of both factors.

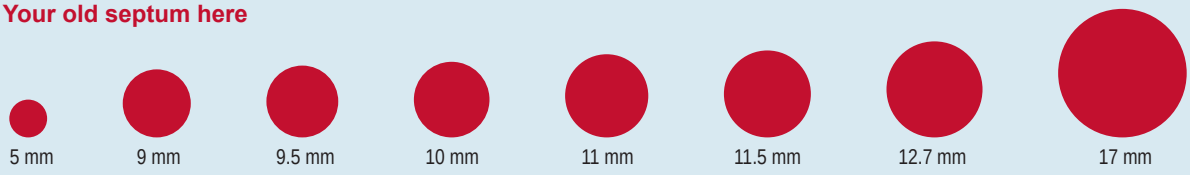
Influence factors in the septum bleeding

- Type of septum - some septa bleed more than others
- Working temperature of the septum -bleed increases with temperature
- Time after septum installation - bleed decreases gradually with the use of the septum
- Column cooling time - with longer cooling time the acumulation of contaminants in the column head increases
- Septum localization -bleed increases when the septum compression through the nut is high
- Column length and stationary phase amount - short columns and small phases thickness keep less bleeding

In the analysis of compounds, septum bleed interferes with the results according to the detector sensitivity. In situations where less sensitivity may be required, septum bleed has less importance.

Measure Guide

Your old septum here



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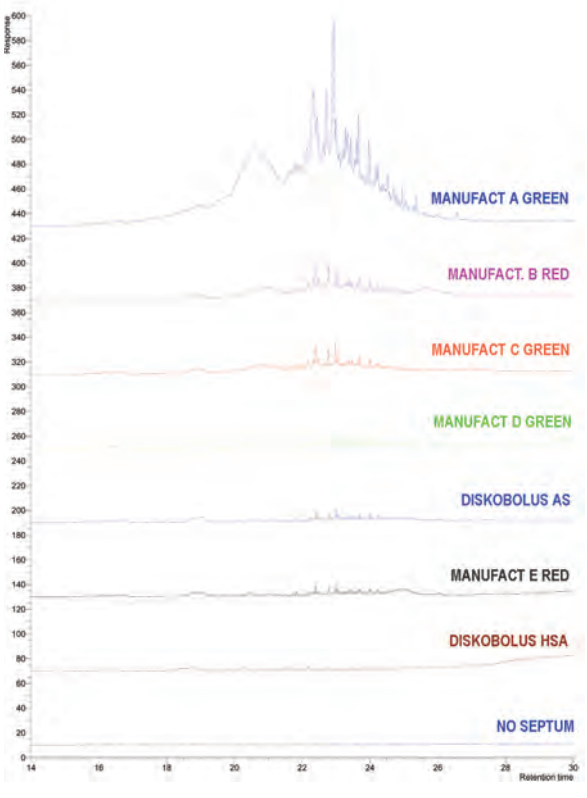
Septum Comparison

Comparing **diskobolus™ hsa** and **diskobolus™ as** septa from Teknokroma to other manufacturers.



Column: Teknokroma Capillary Column **TRB-5**, P/N TR-121515
Dimensions: 15 m x 0.53 mm x 1.5 µm
Sample: A small piece of each type of septum with similar form and measures is inserted in the splitless liner.
Injection: splitless (10 min), 250ºC
Carrier gas: He, constant flow 4 mL/min
Temperature programme: 50ºC (15 min) @ 20ºC/min at 250ºC (15 min)
Detector: FID, 280ºC

Performance Recommendations

Avoid touching the septum with the fingers, in order to avoid a contamination from the filth of the user fingers.

Put the lid on the septa container once it has been opened, to avoid cross contamination.

Change the septum periodically - at least once a week -, this will avoid the leaks through the septum with the consequent losses of time and possibility to damage the column in an irreversible way.

It is preferable to change the septum at the end of the day, maintaining a high oven temperature to avoid the accumulation of bleed during the night. Alternatively, make a temperature programming for the following day to eliminate contaminant traces of septum volatiles.

Once the septum has been changed, verify the flow at the end of the column or the pressure at the entry, to make it sure that the septum has been correctly sealed.

Do not screw up the septum with the nut more than it is necessary.

Use a guide for the needle to prolong the syringe and septum life. The guide helps to inject always in the same place, and avoids random perforations that may cause leaks.

Use needles with narrow outer diameters to avoid the loss of small pieces of septum; this will increase the septum useful life and will avoid the appearance of tails with active compounds.

In case of working with a high sensitivity detector, it is necessary to put the septum in the injection port all the night to obtain the least possible bleed.

Septum Size Chart

Instrument	Septum size (mm)
Agilent (HP)	
5880A, 5890, 6890, 6850	11
5700, 5880	9.5/10
On-Column Injection	5
CE Instruments (TMQ)	
TRACE GC	17
Finnigan (TQM)	
GC 9001	9.5
GCQ	9.5
GCQ w/TRACE	17
QCQ	9.5
TRACE 2000	9.5
Fisons/Carlo Erba (TQM)	
8000 Series	17
PerkinElmer	
Sigma Series	11
900, 990	11
8000 Series	11
Auto SYS	11
Auto SYS XL	11

Instrument	Septum size (mm)
Pye/Unicam	
All Models	7
Shimadzu	
All Models	Plug
Varian	
Injector type:	
Varian Packed Column	9.5/10
Split/Splitless:	
Varian 1078/1079	11.5
Varian 1177	9
Varian 1075/1077	11.5
Varian 1040/41/60/61	9.5
Varian 1093/94 SPI	11.5
Thermo	
PTV injector	12.7

The Teknokroma New range of Diskobolus™ Septa

Diskobolus™ hsa (high sensitivity analysis)

- Ideal for GC/ MS
- Temperature range: 100 - 350 ºC
- Pre-conditioned, ready to be used
- It is supplied in glass containers for high purity

diskobolus™ hsa (high sensitivity analysis) septum has been specially designed and prepared to work at high temperatures, with a low bleed and a good baseline.
Ideal for analysis where high sensitivity is required, like in trace analysis, where low bleed and stability are essential in case of high temperatures.

Teknokroma controls bleeding and the penetration tolerance of each septa batch. Each septum is pre-conditioned and ready to be used.

"If the septum you use has bleed problems, try our diskobolus™ hsa septa"

Cat.No	Description	Pk
TR-D030100	diskobolus hsa 11 mm D. (7/16")	50
TR-D030200	diskobolus hsa 17 mm D.	50

Diskobolus™ as (auto-sampler)

- Ideal for autosamplers
- Extremely low bleed
- Long-life injection (more than 200 injections)
- High stability at more than 350 ºC
- Supplied in glass containers for high purity.

diskobolus™ as septum (auto-sampler) has been manufactured by means of a new technology in the silicone field, and with a extraordinary conditioning process achieving an excellent performance in many applications of gas chromatography.

Ideal to work with autosamplers, it has a long useful life and an extremely low bleed.

"the septum with the best quality /price relationship"

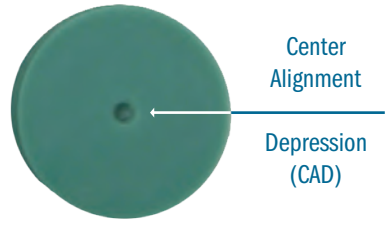
Cat.No	Description	Pk
TR-D030500	diskobolus as 9,5 mm D. (3/8")	50
TR-D030600	diskobolus as 11 mm D. (7/16")	50

Economy Diskobolus™ Blue Septa (Blue)

The Economy **diskobolus™** Blue septa are designed for non-demanding, routine applications. They are easy to penetrate, with a durometer rating of 40-45. These septa can be used up to 200-250ºC and are suitable for 90% of all GC analysis. Made from silicone. The package is for 100 pieces.

Cat.No	Description	Pk
TR-D033070	diskobolus Blue 6.4 mm D. (1/4")	100
TR-D033072	diskobolus Blue 9.5 mm D. (3/8")	100
TR-D033074	diskobolus Blue 11 mm D. (7/16")	100
TR-D033076	diskobolus Blue 12.7 mm. D. (1/2") .	100

Diskobolus™ Septa Center Alignment Depression (CAD) for Improved Performance



- Center Alignment Depression guides the needle for easy penetration
- Reduce needle bending
- Precision molding assures accurate fit
- Available in selected sizes of our premium septa
- Increase septa life

The Teknokroma New range of Diskobolus™ Septa

Diskobolus™ BTO Premium Septa

- Extended Temperature Range , Low Bleed
- Maximum Temperature 400 ºC
- Virtually eliminates injection-port sticking
- Pre-conditioned; packaged in glass to prevent contamination
- Each batch GC-FID tested
- Ideal for use with low bleed “Mass Spec” capillary columns

This septa has an excellent performance. When you need septa to use with high temperature and low bleed these are the septa you should use.

The **diskobolus™** BTO Septa have been optimized to reduce injection port adhesion. Is an ideal septum for trace analysis, high injection port temperature.

The **diskobolus™** BTO Septa are pre-conditioned and packaged in glass to prevent contamination.

Cat.No	Description	Pk
TR-D033000	diskobolus BTO 5 mm D. CAD*	50
TR-D033002	diskobolus BTO 6.4 mm D. (1/4”)	50
TR-D033004	diskobolus BTO 9 mm D. CAD*	50
TR-D033006	diskobolus BTO 9.5 mm. D. (3/8”)	50
TR-D033008	diskobolus BTO 10 mm. D.	50
TR-D033010	diskobolus BTO 11 mm. D. (7/16”) CAD*	50
TR-D033012	diskobolus BTO 11 mm. D. (7/16”) CAD*	100
TR-D033014	diskobolus BTO 11.5 mm. D. CAD*	50
TR-D033016	diskobolus BTO 12.7 mm. D. (1/2”) CAD*	50
TR-D033018	diskobolus BTO 17 mm. D. CAD*	50
TR-D033020	diskobolus BTO “Plug”, for Shimadzu	50

**** CAD “Center Alignment Depression”***

Diskobolus™ Green Septa

- True Long-Life,
  High Temperature Green Septum
- More injections per Septum
- Reduced Injection Port Sticking
- Maximum Temperature 400 ºC

The **diskobolus™** Green Septum was specifically created to combine significantly longer injection life, low bleed and low injection port adhesion. The result is a green septum good for general purpose use. The septa are packaged in glass vials for high purity.

Cat.No	Description	Pk
TR-D033030	diskobolus Green 5 mm D. CAD*	50
TR-D033032	diskobolus Green 9 mm D. CAD*	50
TR-D033034	diskobolus Green 9.5 mm D. (3/8”)	50
TR-D033036	diskobolus Green 11 mm. D. (7/16”) CAD*	50
TR-D033038	diskobolus Green 11 mm. D. (7/16”) CAD*	100
TR-D033040	diskobolus Green 11.5 mm. D. CAD*	50
TR-D033042	diskobolus Green 12.7 mm. D. (1/2”) CAD*	50
TR-D033044	diskobolus Green 17 mm. D.	50
TR-D033046	diskobolus Green “Plug”, for Shimadzu	50

**** CAD “Center Alignment Depression”***

Ferrules teide by Teknokroma™

Ferrules for Gas Chromatography

Ferrules for gas chromatography are used to seal the connections between the column and the injection and detection systems.

The ideal GC column ferrules provide a perfect seal avoiding leaks that would let the entrance of air and contaminants into the equipment, damage the baseline and increase the background signal.

Ferrules must not stick to the column and must tolerate temperature changes during programming.

Ferrule selection

General considerations in the ferrule selection:

- Injector temperature
- Type and sensitivity of the detector
- Type of material that provides a perfect seal to avoid leaks

How to avoid problems with ferrules

- Change the ferrules on installing a new column
- Avoid all type of fingers' grease and other contaminants
- Do not overtighten the ferrules. As a general rule, seals at ¼ turn past fingertight are enough.
- Observe if the reusable ferrules are damaged before
- using them again.

When is it necessary to change the ferrules

- When some changes are observed in retention times
- In case of baseline drift caused by the entrance of oxygen and possible reaction with the stationary phase
- When sample loss is observed
- Increase of the detector background signal

Types of Ferrules

Graphite

Graphite is the best material to work at high temperature and at the same time is the softest ferrule. Therefore it fits the capillary column and seals effectively at only ¼ turn past fingertight. As this is a very soft material, there are easily destroyed or deformed. Ideal for FID and NPD detectors.
Do not use with MS or other oxygen sensitive detectors.
Upper temperature limit 450ºC.

Vespel/Graphite

Vespel /Graphite ferrules are recommended for applications with GC/MS interface or other oxygen sensitive detectors.
The ferrule composition is 60% polymide and 40% graphite. It is a ferrule for general use in Gas Chromatography.
It is mechanically robust and forms a perfect seal. It is a reusable ferrule. It needs a frequent retightening. Limit temperature 400ºC

Vespel

The composition of the Vespel ferrule is 100% polyimide.
It is mechanically robust. It can be removed and reused several times. It is an ideal material for glass and metal columns.
It needs a frequent retightening. Limit temperature 350ºC.

Teflon

These ferrules have been manufactured with 100% Teflon. It is totally inert and very soft. It is used for glass columns. Limit temperature 250ºC.

New Teide™ Ferrules for Gas Chromatography

Graphite Ferrules (100%)

Features:

- Ideal to work with FID and NPD interface applications
- General use to work with capillary columns
- It is the best material to work at high temperatures

Advantages:

- They seal perfectly in fused silica and glass columns
- They resist highest temperature, 450ºC
- Very easy to remove

Limitations:

- They are easily deformed and can only be reused if they are not tighten in excess
- Not recommended to work with GC/MS detectors

Graphite ferrules, (short ferrules) for Agilent 4890, 5890, 6890 except for GC/MS

Cat.No	Description	For Capillary Column	Pk
TR-T031001	teide 1/16" to 0.4 mm	0.18 mm I.D.	10
TR-T031000	teide 1/16" to 0.5 mm	0.25-0.32 mm I.D.	10
TR-T031010	teide 1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T031012	teide 1/16" to 1.0 mm	0.53-0.65 mm I.D.	10
TR-T031014	teide 1/16" to 1/16"	1/16" O.D.	10

Graphite standard ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T031020	teide 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031030	teide 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031040	teide 1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T031042	teide 1/16" to 1.0 mm	0.65 mm I.D.	10

Graphite standard ferrules (two holes)

Cat.No	Description	For Capillary Column	Pk
TR-T031100	teide 1/16" 2 holes, 0.4/0.4	0.25 mm I.D.	10
TR-T031102	teide 1/16" 2 holes, 0.5/0.5	0.32 mm I.D.	10

Graphite reducing ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T031104	teide 1/8" to 0.4 mm	0.25 mm I.D.	10
TR-T031106	teide 1/8" to 0.5 mm	0.32 mm I.D.	10
TR-T031108	teide 1/8" to 0.8 mm	0.53 mm I.D.	10
TR-T031110	teide 1/8" to 1/16"	1/16" O.D.	10
TR-T031112	teide 1/4" to 0.5 mm	0.32 mm I.D.	10
TR-T031116	teide 1/4" to 0.8 mm	0.53 mm I.D.	10
TR-T031118	teide 1/4" to 4 mm	4 mm O.D.	10
TR-T031120	teide 1/4" to 6 mm	6 mm O.D.	10
TR-T031122	teide 1/4" to 1/16"	1/16" O.D.	10
TR-T031124	teide 1/4" to 1/8"	1/8" O.D.	10
TR-T031126	teide 1/8" two holes 0.5/0.5 mm	0.32 mm I.D.	10

Special graphite ferrules for Shimadzu

Cat.No	Description	For Capillary Column	Pk
TR-T031128	teide 5 mm for Shimadzu	5 mm O.D.	10

Special graphite ferrules for ThermoFinnigan M4 Nut and M8 Nut


M4 Nut


M8 Nut

Cat.No	Description	For Capillary Column	Pk
TR-T031130	teide 0.5 mm ID (M8 nut) for ThermoFinnigan (CE)		10
TR-T031132	teide 0.8 mm ID (M8 nut) for ThermoFinnigan (CE)		10
TR-T031134	teide Cup Ferrule for Thermo 0.25 mm I.D. (M4 nut)		10
TR-T031136	teide Cup Ferrule for Thermo 0.35 mm I.D. (M4 nut)		10
TR-T031138	teide Cup Ferrule for Thermo 0.45 mm I.D. (M4 nut)		10
TR-T031140	teide Cup Ferrule for Thermo 0.80 mm I.D. (M4 nut)		10

Liner Seals for ThermoFinnigan Trace


8 mm graphite linear seal for ThermoFinnigan Trace **TR-T032050**

Cat.No	Description	For Capillary Column	Pk
TR-T032050	teide Graphite Liner Seal 8mm for ThermoFi., Trace GC		1

Liner Seals for Agilent


O-Ring **TR-T032056**

Cat.No	Description	For Capillary Column	Pk
TR-T032052	teide Graphite Liner Seal 6.35 mm ID for Agilent		10
TR-T032054	teide Graphite Liner Seal 6.52 mm ID for Agilent		10
TR-T032056	teide O-Ring made of Viton for Agilent		12

New Teide™ Ferrules for Gas Chromatography

Vespel/Graphite Ferrules

Features:
- Ferrules recommended for GC/MS detectors
- More appropriate ferrules for general use in capillary columns
- Perfect seal

Advantages:
- Mechanically robust and long life time ferrules
- Reusable ferrules

Limitations:
- Must be retightened
- Temperature limit 400ºC

Vespel/Graphite ferrules, (short ferrules) for Agilent 4890, 5890, 6890

Cat.No	Description	For Capillary Column	Pk
TR-T031060	teide 1/16" to 0.3 mm	0.10 mm I.D.	10
TR-T031070	teide 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031080	teide 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031090	teide 1/16" to 0.8 mm	0.53 mm I.D.	10

Vespel/Graphite standard ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T032000	teide 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T032010	teide 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T032020	teide 1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T032022	teide 1/16" to 1.0 mm	0.65 mm I.D.	10

Vespel/Graphite standard ferrules (two holes)

Cat.No	Description	For Capillary Column	Pk
TR-T031150	teide 1/16" 2 holes, 0.4/0.4	0.25 mm I.D.	10
TR-T031152	teide 1/16" 2 holes, 0.5/0.5	0.32 mm I.D.	10

Vespel/Graphite reducing ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T031160	teide 1/8" to 0.4 mm	0.25 mm I.D.	10
TR-T031162	teide 1/8" to 0.5 mm	0.32 mm I.D.	10
TR-T031164	teide 1/8" to 0.8 mm	0.53 mm I.D.	10
TR-T031170	teide 1/8" to 1/16"	1/16" O.D.	10
TR-T031172	teide 1/4" to 0.4 mm	0.25 mm I.D.	10
TR-T031174	teide 1/4" to 0.5 mm	0.32 mm I.D.	10
TR-T031176	teide 1/4" to 0.8 mm	0.53 mm I.D.	10
TR-T031178	teide 1/4" to 1/16"	1/16" O.D.	10
TR-T031180	teide 1/4" to 6 mm	6 mm O.D.	10
TR-T031182	teide 1/4" to 1/8"	1/8" O.D.	10

Teide™ Vespel/Graphite reducing ferrules Two Holes

Cat.No	Description	For Capillary Column	Pk
TR-T031166	teide 1/8", two holes 0.5/0.5 mm	0.32 mm I.D.	10
TR-T031168	teide 1/8", two holes 0.8/0.8 mm	0.53 mm I.D.	10

Vespel Ferrules

Features:
- The composition is 100% polyamide
- Ideal for applications with isotherm temperature
- They can be reused several times
- Upper temperature limit 350ºC

Advantages:
- Mechanically robust
- Reusable for several column changes

Limitations:
- Must be frequently retightened
- Do not resist high temperatures
- Leaks in case of temperture programming

Vespel ferrules, (short ferrules) for Agilent 4890, 5890, 6890

Cat.No	Description	For Capillary Column	Pk
TR-T031210	teide short 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031212	teide short 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031214	teide short 1/16" to 0.8 mm	0.53 mm I.D.	10

Vespel standard ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T031216	teide 1/16" to 0.3 mm	0.10-0.18 mm I.D.	10
TR-T031218	teide 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031220	teide 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031222	teide 1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T031224	teide 1/16" to 1.0 mm	0.65 mm I.D.	10
TR-T031226	teide 1/16" 2- holes 0.4/0.4 mm	0.25 mm I.D.	10
TR-T031228	teide 1/16" 2- holes 0.5/0.5 mm	0.32 mm I.D.	10

Vespel reducing ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T031232	teide 1/8" to 0.4 mm	0.25 mm I.D.	10
TR-T031234	teide 1/8" to 0.5 mm	0.32 mm I.D.	10
TR-T031236	teide 1/8" to 0.8 mm	0.53 mm I.D.	10
TR-T031238	teide 1/8" 2-hole 0.5/0.5 mm	0.32 mm I.D.	10
TR-T031239	teide 1/8" 2-hole 0.8/0.8 mm	0.53 mm I.D.	10
TR-T031242	teide 1/8" to 1/16"	1/16" O.D.	10
TR-T031244	teide 1/4" to 1/16"	1/16" O.D.	10
TR-T031246	teide 1/4" to 1/8"	1/8" O.D.	10

New Teide™ Ferrules for Gas Chromatography

Straight Ferrules

Graphite Straight Ferrules

Cat.No	Description	Pk
TR-T031157	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031158	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031159	teide Straight ferrule for tube 1/4" O.D.	10

Vespel/Graphite Straight Ferrules

Cat.No	Description	Pk
TR-T031190	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031192	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031194	teide Straight ferrule for tube 1/4" O.D.	10

Vespel Straight Ferrules

Cat.No	Description	Pk
TR-T031280	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031282	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031284	teide Straight ferrule for tube 1/4" O.D.	10

PTFE Straight Ferrules

Cat.No	Description	Pk
TR-T031250	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031260	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031270	teide Straight ferrule for tube 1/4" O.D.	10

Liners for Agilent Capillary GCs

	Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
	TR-L04010	2 mm Splitless		6.5	79	1
	TR-L04010-5	2 mm Splitless		6.5	79	5
	TR-L04010-10	2 mm Splitless		6.5	79	10
	TR-L04012	2 mm Splitless, Quartz	5181-8818	6.5	79	1
	TR-L04012-5	2 mm Splitless, Quartz		6.5	79	5
	TR-L04012-10	2 mm Splitless, Quartz		6.5	79	10
	TR-L04014	4 mm Split/Splitless		6.3	79	1
	TR-L04014-5	4 mm Split/Splitless	210-3003	6.3	79	5
	TR-L04014-10	4 mm Split/Splitless		6.3	79	10
	TR-L04016	4 mm Split/Splitless, Quartz		6.3	79	1
	TR-L04016-5	4 mm Split/Splitless, Quartz		6.3	79	5
	TR-L04016-10	4 mm Split/Splitless, Quartz		6.3	79	10
	TR-L04018	4 mm Split/Splitless, with Deactivated Glass Wool	19251-60540	6.3	79	1
	TR-L04018-5	4 mm Split/Splitless, with Deactivated Glass Wool		6.3	79	5
	TR-L04018-10	4 mm Split/Splitless, with Deactivated Glass Wool		6.3	79	10
	TR-L04020	Split Liner 4 mm id with Cup	18740-80190	6.3	79	1
	TR-L04020-5	Split Liner 4 mm id with Cup		6.3	79	5
	TR-L04020-10	Split Liner 4 mm id with Cup		6.3	79	10
	TR-L04022	Split Cup Liner, 4 mm id with Deactivated Glass Wool		6.3	79	1
	TR-L04022-5	Split Cup Liner, 4 mm id with Deactivated Glass Wool		6.3	79	5
	TR-L04022-10	Split Cup Liner, 4 mm id with Deactivated Glass Wool		6.3	79	10
	TR-L04024	Split Cup Liner, 4 mm with OV-1/Chromosorb W-P 80/100	18740-60840	6.3	79	1
	TR-L04024-5	Split Cup Liner, 4 mm with OV-1/Chromosorb W-P 80/100		6.3	79	5
	TR-L04024-10	Split Cup Liner, 4 mm id with OV-1/Chromosorb W-P 80/100		6.3	79	10
	TR-L04026	Single Taper Liner, 2 mm id		6.5	79	1
	TR-L04026-5	Single Taper Liner, 2 mm id		6.5	79	5
	TR-L04026-10	Single Taper Liner, 2 mm id		6.5	79	10
	TR-L04028	Single Taper Liner, 4 mm id	5181-3316	6.5	79	1
	TR-L04028-5	Single Taper Liner, 4 mm id		6.5	79	5
	TR-L04028-10	Single Taper Liner, 4 mm id		6.5	79	10
	TR-L04030	Single Taper Liner, 4 mm id with Deactivated Glass Wool	5062-3587	6.5	79	1
	TR-L040305	Single Taper Liner, 4 mm id with Deactivated Glass Wool		6.5	79	5
	TR-L04030-10	Single Taper Liner, 4 mm id with Deactivated Glass Wool		6.5	79	10
	TR-L04032	Double Taper Liner, 4 mm id	5181-3315	6.5	79	1
	TR-L04032-5	Double Taper Liner, 4 mm id		6.5	79	5
	TR-L04032-10	Double Taper Liner, 4 mm id		6.5	79	10

New Teknokroma Liners

Liners for Agilent Packed columns GCs

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L04050	Universal Packed Inj. Liner, Deactivated	5181-3382		93	1
TR-L04050-25	Universal Packed Inj. Liner, Deactivated			93	25
TR-L04052	Universal Packed Inj. Liner, Not Deactivated	5080-8732	93		1
TR-L04052-25	Universal Packed Inj. Liner, Not Deactivated		93		25

Liners for Perkin Elmer Capillary GCs

TR-L04070	Split Liner for Autosystem	N610-1052	4	92	1
TR-L04070-5	Split Liner for Autosystem		4	92	5
TR-L04070-10	Split Liner for Autosystem		4	92	10
TR-L04072	Split Liner for Autosystem with Deactivated Glass Wool		4	92	1
TR-L04072-5	Split Liner for Autosystem with Deactivated Glass Wool		4	92	5
TR-L04072-10	Split Liner for Autosystem with Deactivated Glass Wool		4	92	10
TR-L04074	Split Liner for Autosystem	N-612-1372	2	92	1
TR-L04074-5	Split Liner for Autosystem		2	92	5
TR-L04074-10	Split Liner for Autosystem		2	92	10
TR-L04076	Dimple Splitter	0330-5181		100	1
TR-L04076-5	Dimple Splitter			100	5
TR-L04076-10	Dimple Splitter			100	10
TR-L04078	Splitless	0330-5180		100	1
TR-L04078-5	Splitless			100	5
TR-L04078-10	Splitless			100	10

Liners for Perkin Elmer Packed columns GCs

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L04090	Glass Liner for Autosystem	N-610-1048		112	1
TR-L04090-5	Glass Liner for Autosystem			112	5
TR-L04090-10	Glass Liner for Autosystem			112	10
TR-L04092	Glass Liner for 8000 Series, Sigma 2000	0330-2221		101	1
TR-L04092-5	Glass Liner for 8000 Series, Sigma 2000			101	5
TR-L04092-10	Glass Liner for 8000 Series, Sigma 2000			101	10

Liners for Thermo Finnigan Capillary GCs

	Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
	TR-L05000	Split Liner, 3 mm ID	453 20031		105	1
	TR-L05000-5	Split Liner, 3 mm ID			105	5
	TR-L05000-10	Split Liner, 3 mm ID			105	10
	TR-L05002	Split Liner, 5 mm ID	453 20030		105	1
	TR-L05002-5	Split Liner, 5 mm ID			105	5
	TR-L05002-10	Split Liner, 5 mm ID			105	10
	TR-L05004	Splitless Liner, 3 mm ID	453 20032		105	1
	TR-L05004-5	Splitless Liner, 3 mm ID			105	5
	TR-L05004-10	Splitless Liner, 3 mm ID			105	10
	TR-L05006	Splitless Liner, 5 mm ID	453 20033		105	1
	TR-L05006-5	Splitless Liner, 5 mm ID			105	5
	TR-L05006-10	Splitless Liner, 5 mm ID			105	10
	TR-L05008	For Wide Bore Columns	453 00310		105	1
	TR-L05008-5	For Wide Bore Columns			105	5
	TR-L05008-10	For Wide Bore Columns			105	10
	TR-L05010	Cup Liner	453 00320		105	1
	TR-L05010-5	Cup Liner			105	5
	TR-L05010-10	Cup Liner			105	10
	TR-L05012	PTV Liner, 2 mm ID	453 22045		120	1
	TR-L05012-5	PTV Liner 2 mm ID			120	5
	TR-L05012-10	PTV Liner 2 mm ID			120	10

TK New Teknokroma Liners

Liners for Shimadzu Capillary GCs

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L05020	Split Liner 14A	221-32544-01		99	1
TR-L05020-5	Split Liner 14A			99	5
TR-L05020-10	Split Liner 14A			99	10
TR-L05022	Splitless Liner 14A	221-32544-00		99	1
TR-L05022-5	Splitless Liner 14A			99	5
TR-L05022-10	Splitless Liner 14A			99	10

Liners for Varian Capillary GCs for Injector 1177

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L05030	2 mm Splitless		6.5	79	1
TR-L05030-5	2 mm Splitless		6.5	79	5
TR-L05030-10	2 mm Splitless		6.5	79	10
TR-L05032	2 mm Splitless, Quartz	392611924	6.5	79	1
TR-L05032-5	2 mm Splitless, Quartz		6.5	79	5
TR-L05032-10	2 mm Splitless, Quartz		6.5	79	10
TR-L05034	4 mm Split/Splitless		6.3	79	1
TR-L05034-5	4 mm Split/Splitless		6.3	79	5
TR-L05034-10	4 mm Split/Splitless		6.3	79	10
TR-L05036	4 mm Split/Splitless, Quartz		6.3	79	1
TR-L05036-5	4 mm Split/Splitless, Quartz		6.3	79	5
TR-L05036-10	4 mm Split/Splitless, Quartz		6.3	79	10
TR-L05038	4 mm Split/Splitless, with Deactivated Glass Wool	392611934	6.3	79	1
TR-L05038-5	4 mm Split/Splitless, with Deactivated Glass Wool		6.3	79	5
TR-L05038-10	4 mm Split/Splitless, with Deactivated Glass Wool		6.3	79	10
TR-L05040	Split Liner 4 mm id with Cup	392611931	6.3	79	1
TR-L05040-5	Split Liner 4 mm id with Cup		6.3	79	5
TR-L05040-10	Split Liner 4 mm id with Cup		6.3	79	10
TR-L05042	Split Cup Liner, 4 mm id with Deactivated Glass Wool	392611932	6.3	79	1
TR-L05042-5	Split Cup Liner, 4 mm id with Deactivated Glass Wool		6.3	79	5
TR-L05042-10	Split Cup Liner, 4 mm id withc Deactivated Glass Wool		6.3	79	10
TR-L05044	Split Cup Liner, 4 mm id with OV-1/Chrom. W-P 80/100	392611933	6.3	79	1
TR-L05044-5	Split Cup Liner, 4 mm id with OV-1/Chromosorb W-P 80/100		6.3	79	5
TR-L05044-10	Split Cup Liner, 4 mm id with OV-1/Chromosorb W-P 80/100		6.3	79	10
TR-L05046	Single Taper Liner, 2 mm id	392611926	6.5	79	1
TR-L05046-5	Single Taper Liner, 2 mm id		6.5	79	5
TR-L05046-10	Single Taper Liner, 2 mm id		6.5	79	10
TR-L05048	Single Taper Liner, 4 mm id	392611927	6.5	79	1
TR-L05048-5	Single Taper Liner, 4 mm id		6.5	79	5
TR-L05048-10	Single Taper Liner, 4 mm id		6.5	79	10

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L05050	Single Taper Liner, 4 mm id with Deactivated Glass Wool	392611936	6.5	79	1
TR-L05050-5	Single Taper Liner, 4 mm id with Deactivated Glass Wool		6.5	79	5
TR-L05050-10	Single Taper Liner, 4 mm id with Deactivated Glass Wool		6.5	79	10

TR-L05052	Double Taper Liner, 4 mm id	392611929	6.5	79	1
TR-L05052-5	Double Taper Liner, 4 mm id		6.5	79	5
TR-L05052-10	Double Taper Liner, 4 mm id		6.5	79	10

Liners for Varian Capillary GCs for Injector 1075/1077

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L05054	4 mm Open Split Liner	16-000830-00		72	1
TR-L05054-5	4 mm Open Split Liner			72	5
TR-L05054-10	4 mm Open Split Liner			72	10

TR-L05056	4 mm Open Split Liner with Glass Wool	01-900109-01		72	1
TR-L05056-5	4 mm Open Split Liner with Glass Wool			72	5
TR-L05056-10	4 mm Open Split Liner with Glass Wool			72	10

TR-L05058	Frit Split Liner			72	1
TR-L05058-5	Frit Split Liner	01-900109-3		72	5
TR-L05058-10	Frit Split Liner	16-000830-01		72	10

TR-L05060	Splitless, Borosilicate Glass	01-900109-05		74	1
TR-L05060-5	Splitless, Borosilicate Glass	03-949437-90		74	5
TR-L05060-10	Splitless, Borosilicate Glass	03-949437-00		74	10

TR-L05062	Splitless, Quartz			74	1
TR-L05062-5	Splitless, Quartz			74	5
TR-L05062-10	Splitless, Quartz			74	10

Liners for Varian Capillary GCs for Injector 1093/1094

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L05064	0.5 mm SPI			54	1
TR-L05064-5	0.5 mm SPI	01-900109-06		54	5
TR-L05064-10	0.5 mm SPI	03-918332-01		54	10

TR-L05066	0.8 mm SPI			54	1
TR-L05066-5	0.8 mm SPI	01-900109-07		54	5
TR-L05066-10	0.8 mm SPI	03-918332-02		54	10

Liners for Varian Capillary GCs for Injector 1078/1079

Cat.No	Description	Similar Item No.	OD (mm)	Lenght (mm)	Pk
TR-L05068	3.4 mm ID X 5 mm OD			54	1
TR-L05068-5	3.4 mm ID X 5 mm OD			54	5
TR-L05068-10	3.4 mm ID X 5 mm OD			54	10

TK Gas Leak Detector & Flowmeter

Helium Gas Leak Check

- Super Compact and Light (only 95 g)
- LCD and LED Displays
- Highly Sensitive – 0.0005 ml/min (He)
- USB Port Rechargeable

Specifications

Detection Method:	Thermal Conductivity Detector
Target gas:	Helium, Hydrogen, CO2, Argon, Neon and other non-corrosive gases
Range:	High/Low
Sensibility:	Standard range-minimum 0.005 ml/min (He) High range - minimum 0.0005 ml/min (He)
Display:	LCD
Power Supply:	Rechargeable Battery
Operation Temp:	10-35ºC
Dimensions:	65 (W) x 37 (D) x 143 (H) mm
Weight:	330g approx.
Accesories:	Recharger AC 100 - 220v

Cat.No	Description
GL-2702-19340	Helium Gas Leak Detector LD 229

Flowmeter

- Designed for Gas Chromatography
- 25 point calibration traceable to UKAS standards
- Linear Velocity
- Split Flow Calculation

Specifications

Target gas:	Air, Argon, Argon/5% Methane, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Oxygen
Range:	0.1 to 500 ml/min (0.1 to 275 ml/min for Carbon Dioxide)
Accuracy:	±0.4 ml/min or 2.5% of reading
Resolution:	0.1 ml/min
Dimensions:	68 (W) x 30 (D) x 130 (H) mm
Weight:	150 g approx.
Calibration:	Annually
Traceability:	Calibration traceable to UKAS standards

Cat.No	Description
TK-525GC	Teknokroma 525 GC Flowmeter

Teknokroma 2t Space Sampler

Manual Head Space Sampler
The fruit of Experience

Technical Specifications

Heating temperature Range:	up to 140ºC.
Variable injection:	up to 2,5 ml.
Temperature accuracy:	+/- 0,75ºC
Holds up to 6 vials of:	2, 4, 6, 9, 10, 12, 20, 22 and 27 ml.
Sampling time control with accoustic alarm:	1 to 99 seconds
Equilibrium time control with accoustic alarm:	1 to 99 minutes
Stabilization time from 25ºC to 70ºC with 1 ml syringe and 6 empty 20 ml vials:	20 minutes
Safety temperature:	175ºC
Power:	110 / 220 +/- 10% VAC.

It is according the Pharmacopeia test:

European Pharmacopeia 7th. (2011).

USP 35-NFO (2012).

The Teknokroma 2t Head Space Sampler for Head Space technique within your reach with a low cost and high precision level

The 2t sampler is the first manual system for Static Head Space that allows the application of this technique in a quantitative, manner.

Until now it was only possible to use the technique of Static Head Space with automatic equipment. This “equipment” has a high cost, low versatility and complex operations. For this reason the Static Head Space technique has not been fully used in most laboratories.

The new 2t sampler solves these problems making the technique available to all Gas Chromatography users in a economical and simple way.

It complies with all requeriments of the European CE.

Applications

- Volatiles in pharmaceuticals
- Flavours analysis in food and cosmetic products
- Alcohol and other toxic compounds in blood
- Screening of volatiles in all type of environmental samples (soils, waters, plastics, polymers, etc.)

Teknokroma 2t Head Space Sampler

1

Put the syringe into the black holder.

2

Insert the closed vials with the sample into the heating block.

3

a. Insert the syringe holder into the heating block.
b. Set the temperature and the equilibrium time with the keyboard.
c. Press the start.

4

After the equilibrium time is achieved, move the syringe holder into vial number 1, and aspirate the sample by moving the plunger up until the prefixed volume is reached.

5

Inject the sample into the GC.
Repeat this sequence for the additional samples.

Performance qualification

To check the Head Space SHS system 0112 proper performance, the following reproductibility test is recommended. In this test, we check not only the equipment performance but we also evaluate:

- The vials are correctly sealed.
- The sampling procedure followed by the analyst is correct
- The Gas Chromatograph works properly
- The data-aquisition system works properly

Sample preparation

Add 2.5 µl of benzene and 2.5 µl of toulene to 100 ml of water (25ppm), stir up until it is completely dissolved.

Adjust head space sample conditions and inject.
Integrate the benzene and toluene peaks of the 6 chromatograms obtained.

The Relative Standard Deviation of the area quotients must be lower than 5%.

Benzene area	Toulene area	Area Ratio
3418.461	5441.008	0.628
3466.125	5449.905	0.625
3359.176	5381.354	0.624
3316.646	5374.388	0.624
3782.404	6035.683	0.627
3794.026	6063.646	0.626
	Mean Value	0.626
	Standard deviation (SD)	0.00163
	Relative standard deviation (RSD)	0.26%

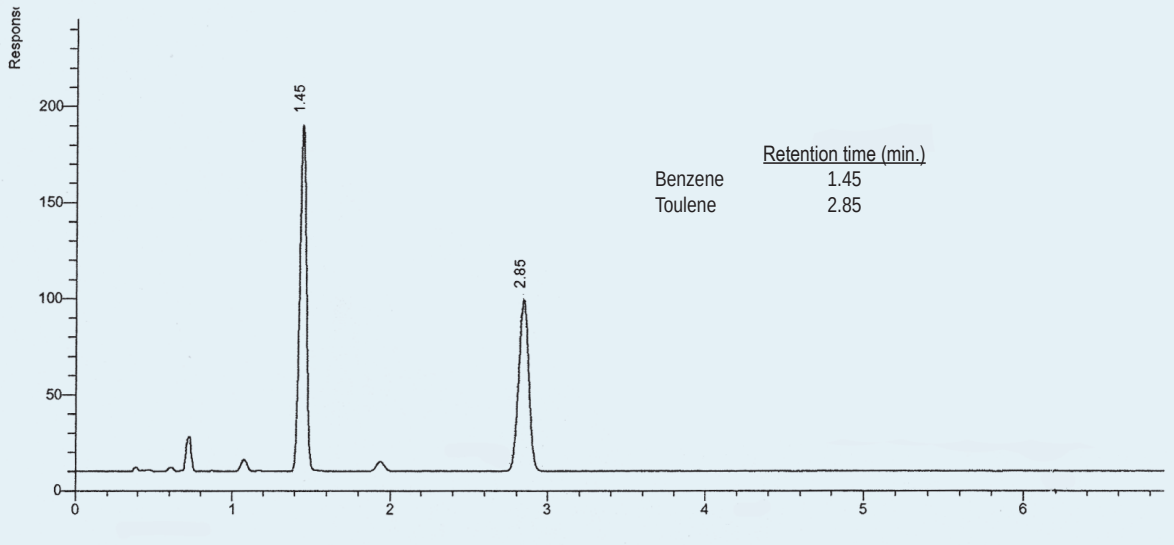
Cat.No	Description
TR-132300	2t Sampler for Static Head Space mod. SHS 0112 (syringe not included)
TR-132113	APE Syringe nod. 1001 HS 1 ml.
TR-132112	APE Syringe nod. 1002 HS 2.5 ml.

Chromatographic Parameters

Column: TRB-1, P/N TR-113015
Dimensions: 15m x 0,53mm x 3µm
Injection: 0,7 ml, head space, (split 1:2), 150ºC
Carrier gas: He, 4psi (27.6 kPa)
Oven temperature: 60ºC (10 min.)
Detector: FID, 250ºC
Sample: 5ml in 10ml vials (25ppm benzene/toulene in water)

Headspace conditions

10ml vials, P/N CC-10-CV
Cap with blue silicone/PTFE seal P/N CC-20-ST3
Healting block temperature: 75ºC
Equilibrium time: 30 minutes
Sampling time: 30 seconds
Syringe used: 1ml (1001 LTN, pst 5, P/N HA-81343)
Sampled volume: 0,7ml



	Retention time (min.)
Benzene	1.45
Toulene	2.85

Teknokroma Headspace Vials

CC-4020-10 CC-4020-410 CC-4020-210

Cat.No	Description	Pk
TR-400023	10 ml Vial, Flat Bottom 23 x 46 mm, Square Rim	100
TR-400024	20 ml Vial, Flat Bottom 23 x 75 mm, Square Rim	100

CC-4020-20 CC-4020-25

CC-C4020-20	20 ml Vial, Flat Bottom 23 x 75 mm, Beveled Edge	100
CC-C4020-25	20 ml Vial, Flat Bottom 23 x 75 mm, Square Rim	1000
CC-C4020-2	20 ml Vial, Round Bottom 23 x 75 mm, Beveled Edge	100

20 mm Crimp Seals with Prefited Septa for Headspace Vials

CC-C4020-34A

CC-C4020-36AP

CC-C4020-32AP

CC-C4020-37AP

CC-C4020-31

CC-C4020-42-A

Cat.No	Seal Type	Septa	Pk
CC-C4020-34A	Regular	Ivory PTFE/Red Rubber, (-40 to +100ºC)	100
CC-C4020-34AP	Pressure Release	Ivory PTFE/Red Rubber, (-40 to +100ºC)	100
CC-C4020-39A	Regular	Clear PTFE/Gray Butyl (-40 to +120ºC)	100
CC-C4020-43A	Magnetic Steel	Clear PTFE/Gray Butyl (-40 to +120ºC)	100
CC-C4020-43AP	Pressure Release	Clear PTFE/Gray Butyl (-40 to +120ºC)	100
CC-C4020-36A	Regular	Gray PTFE/Black Molded Butyl (-40 to +125ºC)	100
CC-C4020-36AP	Pressure Release	Gray PTFE/Black Molded Butyl (-40 to +125ºC)	100
CC-C4020-32A	Regular	Tan PTFE/White Silicone (-60 to +200ºC)	100
CC-C4020-32AP	Pressure Release	Tan PTFE/White Silicone (-60 to +200ºC)	100
CC-C4020-42A	Magnetic Steel	Clear PTFE/Traslucent Blue Silicone (-60 to +200ºC)	100
CC-C4020-42AP	Pressure Release	Clear PTFE/Traslucent Blue Silicone (-60 to +200ºC)	100
CC-C4020-37AP	Pressure Release	Aluminium Foil/White High Temp. Silicone (-60 to +220ºC)	100
CC-C4020-31	Molded Polypropylene Storage Cap	SepCap Integral Molded Polypropylene	250
CC-C4020-42A	Magnetic Steel	Clear PTFE/Translucent Blue Silicone (-60 to +200ºC)	100

Crimpers, Dicrimpers, and Decapping Pliers for 20 mm Top Vials

Cat.No	Description	Use	Pk
CC-C4020-100	Manual Crimper	Attaches 20 mm aluminium crimp seals	1
CC-C4020-101	Decapping Pliers	Removes 20 mm aluminium crimp seals	1
CC-C4020-102	Manual Decrimper	Removes 20 mm aluminium seals without vial damage	1

CC-C4020-102

CC-C4020-100

CC-C4020-101

A revolution in gas purifying of GC and GC/MS gases

Unique «POINT-OF-USE» and «SEMI IN-LINE» glass/metal, diffusionproof Super-Clean Gas Filters, purify the delicate carrier and burner gases for your GC and GC/MS system for Hydrocarbons, Oxygen (colour indicated) and Moisture (colour indicated) to better-as 6.0 gas (99,9999%) quality, independent of the original gas quality.

Analytical advantages of SGT Super-Clean Gas Filters

- Longer lifetime of analytical columns, avoids bleeding, espec. important for MS and ECD.
- Better sensitivity, decreases baseline noise, eliminates spikes.
- Filter-change during analysis within seconds, system stays online.

Purifier Cartridge Capacity

Type of Purifier	Outlet Gas Quality	Usable for	Indicator Color Change	Capacity		
				H_2O(gr)	O_2	Hydrocarbons
Moisture	> 6.0	Inert carrier gas, air hydrogen	Brown to white	7.2		
Oxygen	> 6.0	Inert carrier gas	Green to grey		150 mL	
Hydrocarbon	> 6.0	Inert carrier gas, air hydrogen	No indicator			12 g (as n-butane)
Combi (moisture/hydrocarbon)	> 6.0	Inert carrier gas, air hydrogen	Brown to white	3.5		6 g (as n-butane)
Triple (moisture/oxygen/hydrocarbon)	> 6.0		Brown to white Green to grey	1.8	75 mL	4 g (as n-butane)

Super-Clean Gas Filters

Spec´s on GST Super-Clean Gas Filters

- The specified lifetimes are strongly depending of the quality of the incoming gas.
- Effectivity: <0.1 ppm at a flowrate of 2 liters/minute

Quick-Fit System

One position platform

Benefits of the "quick-fit" system:

- Filter replacement within seconds.
  - Eliminates GC downtime.
- Tool-less filter replacement.
  - Easy handling
- Diffusion-proof Baseplate (also during filter replacement).
  - Eliminates analytical disturbance.
- Baseplates can be wall-mounted.
  - Convenient positioning

Different Standard Configurations

GC/MS Carrier Gas Purification System

- Removal of Oxygen, moisture and hydrocarbons for longer column lifetime and cleaner baseline.
- This configuration is excellent for Carrier Gas and ECD, MS applications.

In this configuration, you need to use: 1-position baseplate + 1 Triple Filter

SG-F0301	Triple Filter (O2/Moisture/Hydrocarbons)
SG-B0010-B8	1-position baseplate - 1/8" Brass

GC/MS Carrier Gas Helium Specific Purification System

System for Purifying Helium in GC/MS systems

In this configuration, you need to use: 1-position baseplate + 1 Triple filter gas specific Helium

SG-F0302	Triple Filter; conditioned with Helium (O2/Moisture/Hydrocarbons)
SG-B0010-B8	1-position baseplate - 1/8" Brass

Fuel Gas Purification System used in a FID

Removal of moisture and hydrocarbons in the gases of the FID for a better baseline

In this configuration, you need to use: 2 units of 1-position baseplate + 2 Combi filters (hydrocarbons/moisture)

One combi filter for purifying Air and other combi filter for purifying hydrogen

2 x SG-B0010-B8	1-position baseplate 1/8 " Brass
2 x SG-F0201	Combi Filter -*hydrocarbons/moisture*

Carrier Gas Purification and FID Gases

The full solution for your GC/FID system
Purifying all gases used in a FID operated GC

In this configuration, you need to use: 3 units of 1-position baseplate + 1 triple filter (O2/Moisture/ Hydrocarbons) for purifying carrier gas + 2 Combi Filter (Hydrcarbons/Moisture) for purifying gases used in a FID.

3 x SG-B0010-B8	1-position baseplate 1/8 " Brass
1 x SG-F0301	Triple Filter (O2/Moisture/Hydrocarbons)
2 x SG-F0201	Combi Filter (Noisture/Hydrocarbons)

High Capacity Purifiers for Carrier and FID Gases

Recommended for low quality gases
Purifying all gases used in a FID operated GC
Use Ultra Capacity Moisture and Oxygen filters for Carrier and 2 Ultra Capacity Hydrocarbon Filter one for Air & one for Hydrogen.

In this configuration, you need to use: 4 units of 1-position baseplate + 1 Moisture Filter, Standard, Ultra Capacity + 1 Oxygen Filter, Standard, Ultra Capacity + 2 Hydrocarbons Filter, Standard, Ultra Capacity.

4 x SG-B0010-B8	1-position baseplate 1/8 " Brass
1 x SG-F0101	Moisture Filter, Standard, Ultra Capacity
1 x SG-F0102	Oxygen Filter, Standard, Ultra Capacity
2 x SG-F0103	Hydrocarbons Filter, Standard, Ultra Capacity, pk/1.

LC-MS Gas Purification System High Flow

Unique 2-Position Super Clean System for purifying the nitrogen gas and zero air utilized in LC/MS instruments.

In this configuration, you need to use: 1 unit of 2-position baseplate + 1 Set of Hydrocarbons purifiers for nitrogen gas + particle filter

1 x SG-B0021-B4	2-position baseplate, 1/4" Brass for 2 High Flow Gas Filters
1 x SG-F0720	Hydrocarbons Filter, Standard, Ultra capacity, pk/2
1 x SG-B0060	0.5 micron Particle Filter 1/4", pk/1

Click-On Inline Super-Clean™ Purifiers®

Original Inline Super -Clean™ Purifier

- High-purity output ensures 99.9999% pure gas
- Click-On fittings for easy, leak-tight cartridge changes; brass or stainless steel, ¼" or 1/8"
- Helium-Specific Triple Purifier is ideal for GC/MS

The SGT Click-On Inline Super-Clean™ purifiers are the latest in in-line gas filtration. Click-On adaptor connectors allow purifiers to be exchanged without introducing oxygen. Spring-loaded check valves seal when a filter is removed and open only when a new filter has been locked in place. There is no need for loosening and tightening fittings every time a purifier is changed, and your system will not become contaminated during the process.

The Triple Click-On Purifier is ideal for purifying carrier gas-it contains oxygen, moisture, and hydrocarbon scrubbers in one cartridge.

The Fuel Gas Click-On Purifier is ideal for purifying flame ionization detector (FIC) fuel gases, removing both moisture and hydrocarbons.

The Helium-Specific Triple Click-On Purifier is ideal for purifying helium in GC/MS systems. This Click-On purifier under helium contains oxygen, moisture, and hydrocarbon scrubbers in one cartridge, and is packed and purged.

Click-On purifier replacement depends on the quality of the incoming gas. Use the double connector and install an indicating cartridge after a purifier to indicate when the purifier should be replaced.

Inline Super-Clean™ Specifications

Type	Output Qualtiy	Max Pressure	Max Flow	Used For	Capacity	Estimated Lifetime (years)
Moisture	>6.0 (99.9999%)	160 psi (11 bar)	25 L/min	Inert Carrier, Helium, Air, H2	21 g H20	>3
Oxygen	>6.0 (99.9999%)	160 psi (11 bar)	25 L/min	Inert Carrier	3000 mL	>3
Hydrocarbon	>6.0 (99.9999%)	160 psi (11 bar)	25 L/min	Inert Carrier, Helium, Air, H2	36 g HCs[3]	>3
Fuel Gas[1]	>6.0 (99.9999%)	160 psi (11 bar)	25 L/min	Inert Carrier, Helium, Air, H2	10 g H20; 18 g HCs[3]	>2
Triple[2]	>6.0 (99.9999%)	160 psi (11 bar)	25 L/min	Inert Carrier	6 g H20; 12 g HCs[3]	>2

[1] Removes hydrocarbons, moisture
[2] Removes hydrocarbons, moisture, oxygen
[3] As n-butane.

Note: Super-Clean™ Gas Filters are recommended for purifying non-corrosive gases with low concentration of contaminants. The maximum concentration of 02 in the incoming gas stream for oxygen purifiers is 0.5%.

Click-On Inline Purifier Steel

Cat.No	Description	pK
SG-CO1005	Click-On Inline Triple Trap (Oxygen/Moisture/Hydrocarbons) Cartridge - Stainless Steel	1 unit
SG-CO1061	Click-On Inline **Indicatinig** Triple He Trap (Oxygen/Moisture/Hydrocarbons) Cartridge-Glass	1un
SG-CO1001	Click-On Inline Moisture Cartridge - Stainless Steel	1 unit
SG-CO1002	Click-On Inline Oxygen Cartridge - Stainless Steel	1 unit
SG-CO1003	Click-On Inline Hydrocarbon Cartridge - Stainless Steel	1 unit
SG-CO1004	Click-On Inline Combi (Oxygen/Moisture) Cartridge - Stainless Steel	1 unit
SG-CO1007	Click-On Inline Combi (Hydrocarbons/Moisture) Cartridge - Stainless Steel	1 unit

Click-On Connectors

Cat.No	Description	pK
SG-CO2001	Click-On Connectors 1/4" Brass	2 units
SG-CO2002	Click-On Connectors 1/8" Brass	2 units
SG-CO2010	Click-On Connectors 1/4" SS	2 units
SG-CO2011	Click-On Connectors 1/8" SS	2 units
SG-CO2020	Click-On Double Connectors to connect SS Trap with indicating trap	1 unit

SGT Super Big Traps

Click-On Inline Purifier Glass

Cat.No	Description	pK
SG-CO1041	Click-On Inline Combi Trap (Oxygen/Moisture) Cartridge with indicator - Glass	1 unit
SG-CO1051	Click-On Inline Triple Trap (Oxygen/Moisture/Hydrocarbons) Cartridge with indicator - Glass	1 unit
SG-CO1011	Click-On Inline Moisture Cartridge with indicator - Glass	1 unit
SG-CO1021	Click-On Inline Oxygen Cartridge with indicator - Glass	1 unit
SG-CO1031	Click-On Inline Hydrocarbon Cartridge with indicator - Glass	1 unit

SGT Super Big Traps with electronic indicator

- Ideal for Central Purifying Solutions
- Largest Big Trap Available
- High-purity output ensures 99.9999% Pure gas
- Click-On fittings for easy, leaktight cartridge changes
- High Pressure Stainless Steel

Click-On Inline Super-CleanTM Big Traps are inline traps designed with Click-On adaptor connectors which allows inline cartridges to be exchanged without introducing oxygen. Spring loaded check valves seal when a filter is removed and open only when a new filter has been locked in place. There is no need for loosening and tightening fittings every time a trap is changed and your system will not become contaminated during the process

Specifications

Material	Stainless Steel
Length	22 inch
Diameter	2,5 inch
Max. Inlet Pressure	1000 psi
Max. Flow (GC/MS)	8 L/min
Max. Flow (LC/MS)	25 L/min
Pressure Drop *	0,30 psi

Virtual Indicator Compatible

Compatible with the Virtual Indicator platform, allows you to monitorthe status with the CLIK device.

Capacity Data

Contaminant		Capacity					
Contaminant	**Gas Purify**	**Triple (Oxy/Moist/Hydr)**	**Moisture**	**Oxygen**	**Hydrocarbons**	**Combi (Hidr/Moist)**	**Combi (Oxy/Moist)**
Oxygen	< 5 ppm	2.0 L	-	4.5 L	-	-	2,25 L
Hydrocarbon	< 5 ppm	30 g	-	-	90 g	45 g	-
Moisture	< 5 ppm	70 g	210 g	-	-	105 g	105 g

Replacement cartridges for Big Traps

Cat.No	Description	Gas Type
SG-COBT1008	Triple H2 (Oxy/Moist/Hydr) Big Trap	Hydrogen
SG-COBT1006 *1	Triple He (Oxy/Moist/Hydr) Big Trap	Helium
SG-COBT1005	Triple (Oxy/Moist/Hydr) Big Trap	Nitrogen
SG-COBT1001	Moisture Big Trap	(He/Ar/Me)
SG-COBT1002	Oxygen Big Trap	(He/Ar/Me)
SG-COBT1003 *2	LC/MS Hydrocarbon Big Trap	(He/Ar/Me)
SG-COBT1007	Combi (Hydr/Moist) Big Trap	(He/Ar/Me)
SG-COBT1004	Combi (Oxy/Moist) Big Trap	(He/Ar/Me)

*1 : recommended for GC/MS *2 : recommended for LC/MS

Installation Kits (includes re-usable fittings)

Catalog No	Catalog No. Extension	(Re-usable) Fitting
Choose any catalog no from the table on the left	**-S8**	1/8" Stainless Steel
	-S4	1/4" Stainless Steel
	-B8	1/8" Brass
	-B4	1/4" Brass

For Example: to order a Triple He Big Trap Installation Kit with 1/8" Stainless Steel Click-On Connectors, the part number would be: SGT-COBT1006-S8