

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 deteriorate 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.

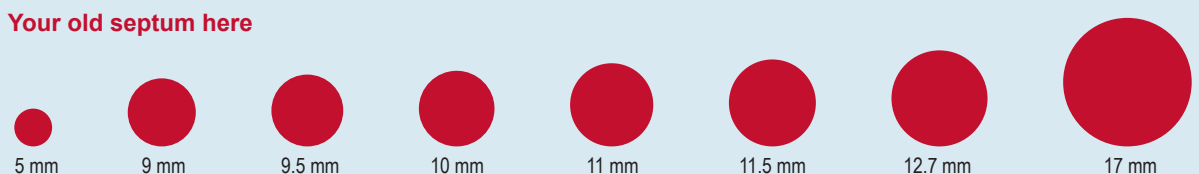
Influence factors in the septum bleeding

- 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 accumulation 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

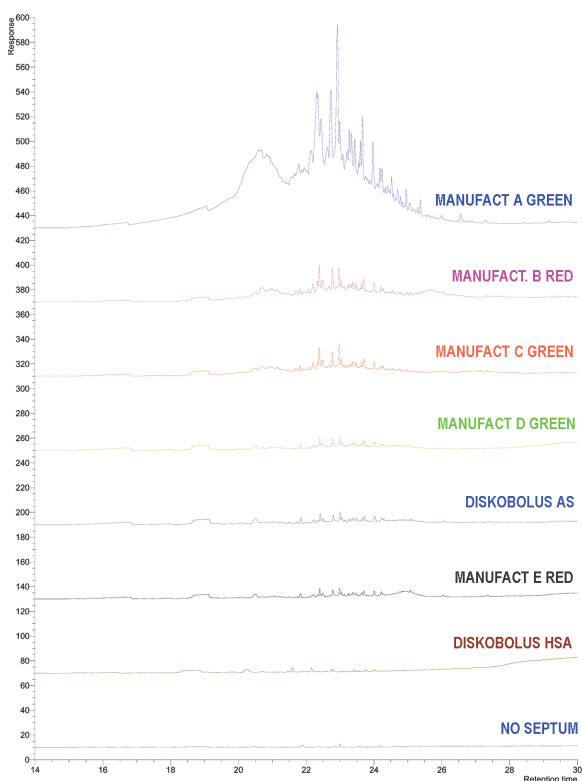


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Septum Comparison



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), 250°C
 Carrier gas: He, constant flow 4 mL/min
 Temperature programme: 50°C (15 min) @ 20°C/min at 250°C (15 min)
 Detector: FID, 280°C

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)	Instrument	Septum size (mm)
Agilent (HP)		Pye/Unicam	
5880A, 5890, 6890, 6850	11	All Models	7
5700, 5880	9.5/10	Shimadzu	
On-Column Injection	5	All Models	Plug
CE Instruments (TMQ)		Varian	
TRACE GC	17	<i>Injector type:</i>	
Finnigan (TQM)		Varian Packed Column	9.5/10
GC 9001	9.5	<i>Split/Splitless:</i>	
GCQ	9.5	Varian 1078/1079	11.5
GCQ w/TRACE	17	Varian 1177	9
CCQ	9.5	Varian 1075/1077	11.5
TRACE 2000	9.5	Varian 1040/41/60/61	9.5
Fisons/Carlo Erba (TQM)		Varian 1093/94 SPI	11.5
8000 Series	17	Thermo	
PerkinElmer		PTV injector	12.7
Sigma Series	11		
900, 990	11		
8000 Series	11		
Auto SYS	11		
Auto SYS XL	11		

The Teknokroma New range of Diskobolus™ Septa



Diskobolus™ hsa (high sensitivity analysis)



- Ideal for GC/ MS
- Temperature range: 100 - 350 °C
- 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 °C
- 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 an 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

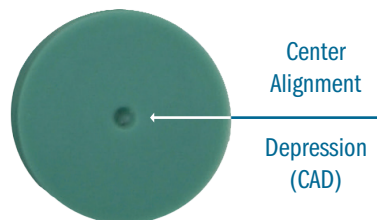
Economy Diskobolus™ Blue Septa (Blue)



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 200-250°C 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

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Diskobolus™ BTO Premium Septa



- Extended Temperature Range , Low Bleed
- Maximum Temperature 400 °C
- 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 °C

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” 