



## SiliaSep™ PREMIUM – Spherical Silica Flash Cartridges

Packed with SiliCycle's 25 µm spherical silica gel, SiliaSep PREMIUM flash cartridges will give you better resolution for difficult purifications, sharper peaks, higher loading capacity and faster separations.

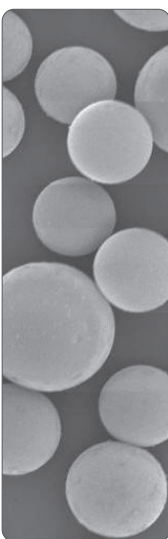
### SiliaSep™ PREMIUM Formats & Phases

To build your own product number, just add the Format Code to the Phase PN: **FLH-[Phase PN]-[Format Code]**

Example: SiliaSep PREMIUM C18 25 µm spherical silica, 4 g cartridge: **FLH-03295D-A-ISO04**.

SiliaSep PREMIUM Formats							
Format Code	Silica Weight	Qty/Box*	Dimensions (ID x Length**)	Column Volume	Recommended Flow Rate	Loading Capacity	Max Operating Pressure
SiliaSep PREMIUM 4 g [ISO04]	Bare: 4 g	20	12 x 98 mm	4.9 mL	15 - 25 mL/min	Bare: 0.05 - 0.5 g	225 psi / 16 bar
	Bonded: ≥ 5 g	2				Bonded: 0.02 - 0.2 g	
SiliaSep PREMIUM 12 g [ISO12]	Bare: 12 g	20	21 x 117 mm	17 mL	20 - 40 mL/min	Bare: 0.16 - 1.6 g	
	Bonded: ≥ 15 g	1				Bonded: 0.06 - 0.6 g	
SiliaSep PREMIUM 25 g [ISO25]	Bare: 25 g	15	21 x 165 mm	31 mL	20 - 45 mL/min	Bare: 0.33 - 3.3 g	
	Bonded: ≥ 30 g	1				Bonded: 0.125 - 1.25 g	
SiliaSep PREMIUM 40 g [ISO40]	Bare: 40 g	15	27 x 169 mm	47 mL	25 - 50 mL/min	Bare: 0.52 - 5.2 g	
	Bonded: ≥ 45 g	1				Bonded: 0.2 - 2 g	
SiliaSep PREMIUM 80 g [ISO80]	Bare: 80 g	12	31 x 237 mm	123 mL	40 - 80 mL/min	Bare: 1.04 - 10.4 g	
	Bonded: ≥ 90 g	1				Bonded: 0.4 - 4 g	
SiliaSep PREMIUM 120 g [IS120]	Bare: 120 g	10	36 x 256 mm	190 mL	60 - 120 mL/min	Bare: 1.56 - 15.6 g	205 psi / 13 bar
	Bonded: ≥ 130 g	1				Bonded: 0.6 - 6 g	
SiliaSep PREMIUM 220 g [IS220]	Bare: 220 g	4	60 x 195 mm	306 mL	60 - 190 mL/min	Bare: 2.86 - 28.6 g	160 psi / 11 bar
	Bonded: ≥ 230 g	1				Bonded: 1.1 - 11 g	
SiliaSep PREMIUM 330 g [IS330]	Bare: 330 g	4	60 x 268 mm	441 mL	80 - 190 mL/min	Bare: 4.29 - 42.9 g	
	Bonded: ≥ 360 g	1				Bonded: 1.65 - 16.5 g	
SiliaSep XL PREMIUM 800 g*** [IS750]	Bare: 800 g	2	78 x 382 mm	1.5 L	200 - 300 mL/min	Bare: 10.4 - 104 g	125 psi / 8 bar
	Bonded: ≥ 870 g	1				Bonded: 4 - 40 g	
SiliaSep XL PREMIUM 1,600 g*** [I1500]	Bare: 1,600 g	2	104 x 429 mm	2.9 L	300 - 450 mL/min	Bare: 20.8 - 208 g	100 psi / 7 bar
	Bonded: ≥ 1,700 g	1				Bonded: 8 - 80 g	

SiliaSep PREMIUM Phases		
Phases	Phase PN	
FUNCTIONALIZED SPHERICAL SILICA	Bare Spherical Silica	10095D-A
	C18	03295D-A
	C8	30895D-A
	Phenyl	34095D-A
	PFP	67595D-A
	Amine	52095D-A
	Diol nec	35095D-A
	Cyano	38095D-A
	SCX	60595D-A
	SCX-2	51295D-A
	SAX nec	66595D-A
	SAX-2 nec	66495D-A



\* Bigger box sizes available.

\*\* Cartridge length includes luer-lock and connection tip.

\*\*\* For SiliaSep XL formats, you may need to use an XL Adapter to connect the cartridge onto your system. Part number AUT-0127-1.

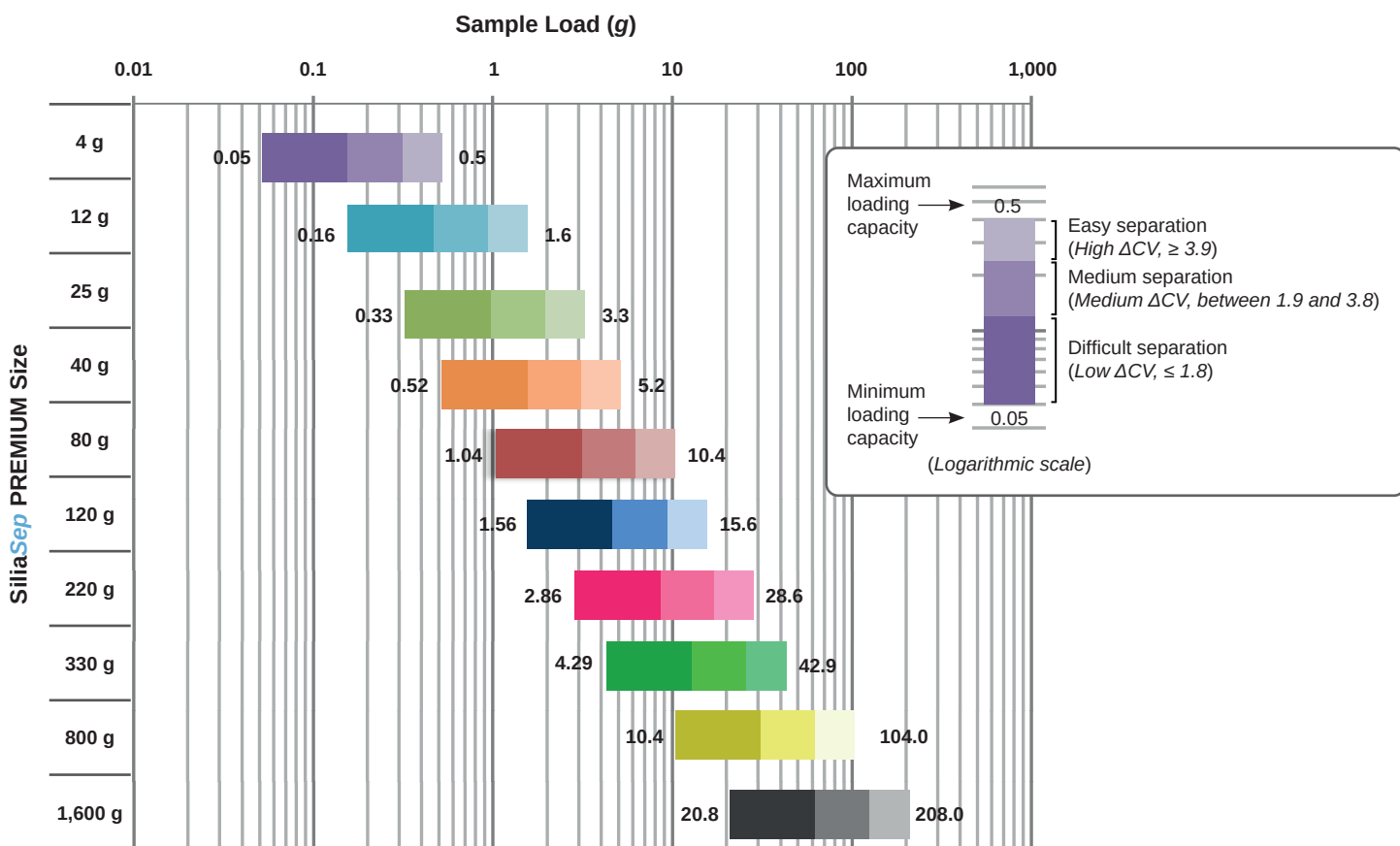
#### Notes:

- 3 kg cartridges are also available.
- All of our bare & bonded silica gels, like SiliaMetS Metal Scavengers, are available to be packed in SiliaSep PREMIUM flash cartridges to accommodate your chemistry.

Contact us for more information: [info@silicycle.com](mailto:info@silicycle.com)

# SiliaSep PREMIUM Loading Capacity

The chart below will help you choose the right SiliaSep PREMIUM size according to your sample size and your TLC results.



The loading capacity depends on the sample itself, the column dimensions and the silica type. You will find below the sample loading we recommend with our SiliaSep PREMIUM flash cartridges. For easily separated compounds ( $\Delta CV > 6$ ) we suggest to load up to 15 % on bare spherical silica.

SiliaSep PREMIUM Loading Chart												
Dimensions ID x Length	SiliaSep Format	Load (g)										
		$\Delta CV = 0.1 - 0.6$	$\Delta CV = 0.7 - 1.2$	$\Delta CV = 1.3 - 1.8$	$\Delta CV = 1.9 - 2.4$	$\Delta CV = 2.5 - 3.1$	$\Delta CV = 3.2 - 3.8$	$\Delta CV = 3.9 - 4.5$	$\Delta CV = 4.6 - 5.2$	$\Delta CV = 5.3 - 6.0$	$\Delta CV > 6$	
12 x 98 mm	4 g	0.052	0.104	0.156	0.208	0.260	0.312	0.364	0.416	0.468	0.520	
21 x 117 mm	12 g	0.156	0.312	0.468	0.624	0.780	0.936	1.092	1.248	1.404	1.560	
21 x 165 mm	25 g	0.325	0.650	0.975	1.300	1.625	1.950	2.275	2.600	2.925	3.250	
27 x 169 mm	40 g	0.520	1.040	1.560	2.080	2.600	3.120	3.640	4.160	4.680	5.200	
31 x 237 mm	80 g	1.040	2.080	3.120	4.160	5.200	6.240	7.280	8.320	9.360	10.400	
36 x 256 mm	120 g	1.560	3.120	4.680	6.240	7.800	9.360	10.920	12.480	14.040	15.600	
60 x 195 mm	220 g	2.860	5.720	8.580	11.440	14.300	17.160	20.020	22.880	25.740	28.600	
60 x 268 mm	330 g	4.290	8.580	12.870	17.160	21.450	25.740	30.030	34.320	38.610	42.900	
78 x 382 mm	800 g	10.400	20.800	31.200	41.600	52.000	62.400	72.800	83.200	93.600	104.000	
104 x 429 mm	1,600 g	20.800	41.600	62.400	83.200	104.000	124.800	145.600	166.400	187.200	208.000	
		Difficult Separation			Medium Separation			Easy Separation				

**Note:** CV represents the Column Volume (so flash retention time), inversely proportional to TLC retention factor ( $R_f$ ).

# SiliaSep PREMIUM Scalability and Competition

Packed with our 25 µm spherical silica gels, SiliaSep PREMIUM cartridges offer a greater resolution and better separation.

## SiliaSep PREMIUM Scalability

SiliaSep PREMIUM perfect linearity between all formats, from 4 g cartridges to XL 1,600 g cartridges, will allow you to easily scale-up your methods and transfer your preliminary tests onto bigger cartridges sizes.

To highlight the scalability, you will find below the purification of a solution of Aniline, Anisole and Benzoic Acid in DMSO on SiliaSep PREMIUM C18 25 g and 330 g. You can see that the chromatograms are almost identical!

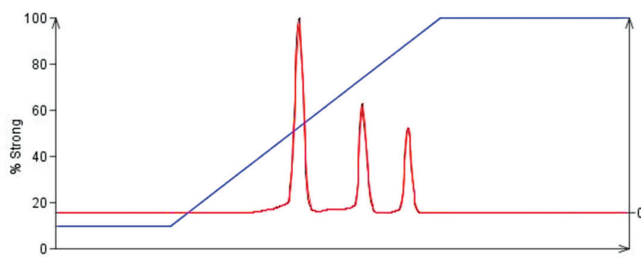
### Chromatographic Conditions

**Mobile phase:** gradient Water / Methanol (90:10 to 0:100)

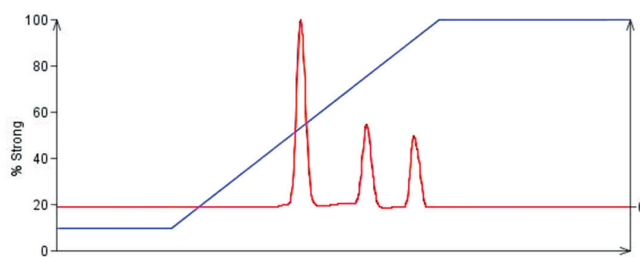
**Flow rate:** 40 mL/min

**Injection volume:** 0.5 mL

**Wavelength:** 254 nm



SiliaSep PREMIUM C18 25 g



SiliaSep PREMIUM C18 330 g

## SiliaSep PREMIUM against the Competition

We compared the results on our SiliaSep PREMIUM with two well known brands in chromatography and purification. This study shows that SiliaSep PREMIUM cartridges perform very well and represent a valuable and reliable alternative.

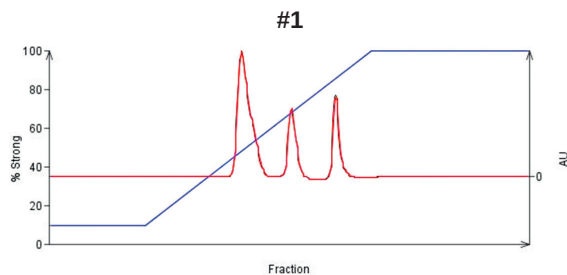
### Chromatographic Conditions

**Mobile phase:** gradient Water / Methanol (90:10 to 0:100)

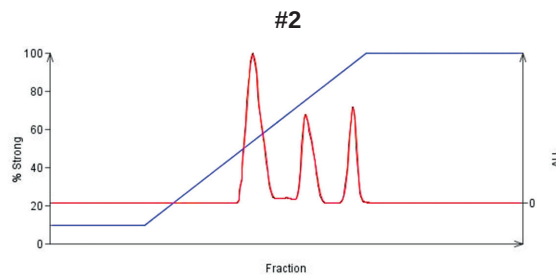
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**Injection volume:** 0.5 mL

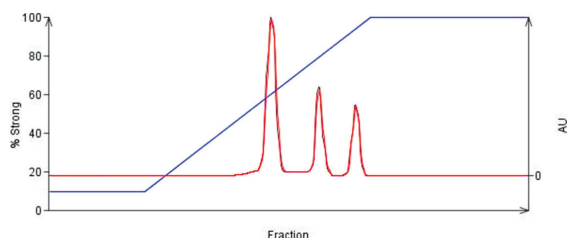
**Wavelength:** 254 nm



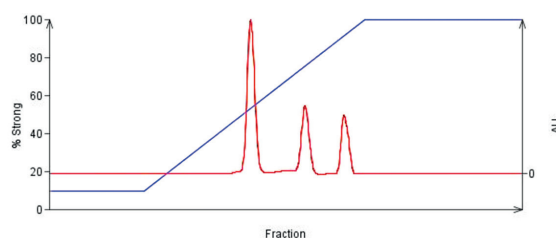
Competitor I



Competitor B



SiliaSep PREMIUM 12 g



SiliaSep PREMIUM 40 g

## DISCOVER OUR BROCHURES

### METAL & ORGANIC SCAVENGING

**SiliaMetS**® – Metal Scavengers  
**SiliaBond**® – Organic Scavengers  
**E-PAK**® – Fixed Bed Flow-Through Purification Cartridges



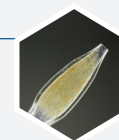
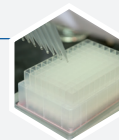
### CHROMATOGRAPHY & PURIFICATION

**SiliaFlash**® – Irregular Silica Gels  
**SiliaSphere**™ PC – Spherical Silica Gels  
**SiliaBond**® – Chromatographic Phases  
**SiliaSep**™ – Flash Cartridges  
**SiliaPlate**™ – TLC Plates



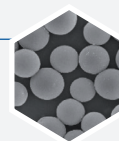
### SAMPLE PREPARATION

**SiliaPrep**™ – Silica-based SPE Cartridges & Well Plates  
**SiliaPrepX**™ – Polymeric SPE Cartridges & Well Plates  
**SiliaPrep**™ – Micro-SPE Tips  
**SiliaFast**™ – FaPEX® Cartridges for Pesticide Residue Analysis



### ANALYTICAL & PREPARATIVE CHROMATOGRAPHY

**SiliaSphere**™ – Spherical Silica Gels  
**SiliaChrom**® – HPLC Columns



### ORGANIC SYNTHESIS

**SiliaBond**® – Reagents & Oxidants



### R&D SERVICES

Metal & Organic Scavenging Screening  
 Organic Synthesis  
 Extraction & Purification  
 Custom Column Packing  
 Material Science

