SOLUTIONS FOR SAMPLE PREPARATION

SILICYCLE

Founded in 1995, SiliCycle is specialized in the development, manufacturing and commercialization of high value silica gels and specialty products for chromatography, purification, and synthesis.

Enjoy a virtual tour of SiliCycle's facility

Solutions for Sample Preparation

SPE Cartridges and Well Plates

SiliCycle, the right choice for:

- Wide variety of sorbents
- Tight particle size distribution
- Very good packing (*no fines*)
- High recovery and yield

Silica-based Silia*Prep*™ and Polymeric Silia*PrepX*™

Solid-phase extraction (*SPE*) is designed for rapid sample preparation and purification prior to chromatographic analysis.

Our Silia*Prep* (*silica-based*) and Silia*PrepX* (*polymeric*) families of SPE cartridges and well plates have been created to cover the entire spectrum of solid-phase extraction. This complete range of sorbents allows treatment of most common matrices:

- human and animal biological fluids
- waste waters
- petrochemical residues
- toxicological residues
- food and beverage

Silia*Prep* and Silia*PrepX* products are made using state-of-the-art technology, giving you the highest quality and the best lot-to-lot reproducibility. These advanced sorbents are providing you a clean extract, reducing ion suppression and increasing selectivity for LC/MS/MS applications.

Cartridge sizes

We can provide a complete range of SPE cartridge lengths and diameters.

Silia*Prep* Cartridge Sizes							
	1 mL	3 mL	6 mL	12 mL	25 mL	70 mL *	150 mL *
Dimensions (*Diam. x Length*)	5.7 x 65.7 mm	8.9 x 74.7 mm	12.7 x 77.8 mm	15.8 x 90 mm	20.5 x 100 mm	26.8 x 154 mm	38.2 x 170 mm
Bed Weights Available	30 - 100 mg	30 - 500 mg	100 mg - 2 g	500 mg - 2 g	1 - 5 g	5 - 20 g	25 - 70 g
							

* Commercialized under Silia*Sep* OT branding. Please see product page here.

Tips for your method development

Tips for Your Method Development		
Sorbent Type	**Silica-Based (*SiliaPrep*)**	**Polymeric (*SiliaPrepX*)**
Sorbent Capacity	Load up to 5 % of bed weight: 100 mg of silica-based sorbent will retain up to 5 mg of sample	Load up to 10 % of bed weight: 100 mg of polymeric sorbent will retain up to 10 mg of sample
Not enough sorbent: ANALYTE LOSS ► low recovery and reproducibility Too much sorbent: MORE EXPENSIVE ► more solvent used, taller SPE cartridges Concentrated samples: double the bed weight to avoid analyte loss		

Product Selection Guide by Technical Characteristics

Product Selection Guide by Technical Characteristics (*typical values*)								
Silia*Prep* / Silia*PrepX*	Phase Code	Particle Size (*µm*)	Pore Size (*Å*)	Surface Area (m^2/g)	Carbon Load (%)	Endcapping	Ionic Capacity	pH Stability
Silica-Based Non Polar Phases								
Silia*Prep* C18	R00230B	40 - 63	60	500	17	Yes	-	2 - 10
Silia*Prep* C18 *nec*	R35530B	40 - 63	60	500	17	No	-	2 - 10
Silia*Prep* C18 WPD	R33229G	37 - 55	125	300	13	Yes	-	2 - 10
Silia*Prep* C8	R31030B	40 - 63	60	500	12	Yes	-	2 - 10
Silia*Prep* C8 *nec*	R31130B	40 - 63	60	500	12	No	-	2 - 10
Silia*Prep* Phenyl (*PH*)	R34030B	40 - 63	60	500	9	Yes	-	2 - 10
Silia*Prep* PFP	R67530B	40 - 63	60	500	11	Yes	-	2 - 10
Silica-Based Polar Phases								
Silia*Prep* Cyano (*CN*)	R38030B	40 - 63	60	500	7	Yes	-	2 - 10
Silia*Prep* Diol *nec*	R35030B	40 - 63	60	500	8	No	-	2 - 10
Silia*Prep* Florisil	AUT-0014	≤ 75	80	250	-	-	-	3 - 8
Silia*Prep* Florisil LP	AUT-0014LP	75 - 150	80	250	-	-	-	3 - 8
Silia*Prep* Florisil PR	AUT-0015	150 - 250	-	200	-	-	-	3 - 8
Silia*Prep* Silica	R10030B	40 - 63	60	500	-	-	-	2 - 9
Silia*Prep* Silica WPD	R10029G	37 - 55	125	300	-	-	-	2 - 9
Silia*Prep* Acidic Alumina	AUT-0053	75 - 150	70	150 - 320	-	-	-	3 - 8
Silia*Prep* Neutral Alumina	AUT-0054	75 - 150	70	150 - 320	-	-	-	3 - 8
Silia*Prep* Basic Alumina	AUT-0055	75 - 150	70	150 - 320	-	-	-	3 - 8
Silica-Based Ion Exchange Phases								
Silia*Prep* SAX *nec*	R66530B	40 - 63	60	500	10	No	0.90 meq/g	2 - 10
Silia*Prep* SAX-2 *nec*	R66430B	40 - 63	60	500	9	No	0.71 mmol/g	2 - 10
Silia*Prep* Carbonate	R66030B	40 - 63	60	500	6	Yes	0.46 mmol/g	2 - 10
Silia*Prep* Amine (*WAX*)	R52030B	40 - 63	60	500	7	Yes	1.2 mmol/g	2 - 10
Silia*Prep* SCX	R60530B	40 - 63	60	500	9	Yes	0.54 meq/g	2 - 10
Silia*Prep* SCX-2	R51230B	40 - 63	60	500	5	Yes	0.63 meq/g	2 - 10
Silia*Prep* WCX	R70030B	40 - 63	60	500	7	Yes	0.92 mmol/g	2 - 10
Specialty Phases								
Silia*Prep* PCB	R00650030B	40 - 63	60	500	3	Proprietary	-	2 - 10
Silia*Prep* CleanDRUG	R651230B	40 - 63	60	500	9	Proprietary	-	2 - 10
Silia*Prep* CleanENVI	R31930B	40 - 63	60	500	19	Proprietary	-	2 - 10
Silia*Prep* PAH	R0610030B	40 - 63	60	500	13	Proprietary	-	2 - 10
Polymeric Phases								
Silia*PrepX* DVB	P0001	85	60	1,000	90	-	-	1 - 14
Silia*PrepX* HLB	P0002	40	110	850	88	-	-	1 - 14
Silia*PrepX* SCX	P0005	85	60	800	80	-	0.80 meq/g	1 - 14
Silia*PrepX* SAX	P0010	85	60	900	85	-	0.20 meq/g	1 - 14
Silia*PrepX* WCX	P0015	85	60	800	85	-	0.70 meq/g	1 - 14
Silia*PrepX* WAX	P0020	85	60	800	86	-	0.50 meq/g	1 - 14

Product Selection Guide by Manufacturer

The table below will help you find equivalences to products of well-known SPE manufacturers.

Product Selection Guide by Manufacturer					
SiliCycle	Waters	Phenomenex	Agilent	Biotage	Macherey-Nagel
Silia*Prep* C18	Sep-Pak® tC18	Strata® C18-E	Bond Elut® C18	Isolute® C18 (*EC*)	Chromabond® C18 ec
Silia*Prep* C18 *nec*		Strata® C18-U	Bond Elut® C18 OH	Isolute® C18	Chromabond® C18
Silia*Prep* C18 WPD	Sep-Pak® C18	Strata® C18-T	Bond Elut® C18 EWP	Isolute® MFC18	Chromabond® C18 ec f
Silia*Prep* C8	Sep-Pak® C8	Strata® C8	Bond Elut® C8	Isolute® C8 (*EC*)	
Silia*Prep* C8 *nec*				Isolute® C8	Chromabond® C8
Silia*Prep* Phenyl (*PH*)		Strata® Phenyl	Bond Elut® PH	Isolute® PH	Chromabond® C_6H_5
Silia*Prep* PFP					
Silia*Prep* Cyano (*CN*)	Sep-Pak® Cyanopropyl	Strata® CN	Bond Elut® Cyano (*CN-E*)	Isolute® CN	Chromabond® CN
Silia*Prep* Diol *nec*	Sep-Pak® Diol		Bond Elut® Diol (*2OH*)	Isolute® DIOL	Chromabond® OH (*Diol*)
Silia*Prep* Silica		Strata® SI-1 Silica	Bond Elut® SI	Isolute® SI	Chromabond® SiOH
Silia*Prep* Silica WPD	Sep-Pak® Silica	Strata® SI-2 Silica			
Silia*Prep* Florisil LP & Florisil PR	Sep-Pak® Florisil	Strata® FL-PR (*Florisil*)	Bond Elut® Florisil (*FL*)	Isolute® FL	Chromabond® Florisil
Silia*Prep* Alumina (*Acidic, Neutral, Basic*)	Sep-Pak® Alumina (*A, N, B*)	Strata® Alumina-N	Bond Elut® Alumina (*A, N, B*)	Isolute® AL-A, AL-N and AL-B	Chromabond® Alox (*A, N, B*)
Silia*Prep* SAX *nec* (*TMA Chloride*)	Sep-Pak® Accell Plus QMA	Strata® SAX	Bond Elut® SAX	Isolute® SAX	Chromabond® SB
Silia*Prep* SAX-2 *nec* (*TMA Acetate*)				Isolute® PE-AX	
Silia*Prep* Carbonate	Sep-Pak® Accell Plus QMA Carbonate Plus			Isolute® Si-Carbonate (*EC*)	
Silia*Prep* Amine (*WAX*)	Sep-Pak® Aminopropyl (NH_2)	Strata® NH_2	Bond Elut® NH2	Isolute® NH_2	Chromabond® NH_2
Silia*Prep* Tosic Acid (*SCX*)		Strata® SCX	Bond Elut® SCX	Isolute® SCX-3	Chromabond® SA
Silia*Prep* SCX-2 (*Propylsulfonic Acid*)			Bond Elut® PRS	Isolute® SCX-2	Chromabond® PSA
Silia*Prep* WCX (*Carboxylic Acid*)	Sep-Pak® Accell Plus CM	Strata® WCX	Bond Elut® CBA	Isolute® CBA	Chromabond® PCA
Silia*Prep* PCB			Bond Elut® PCB		Chromabond® SA/SiOH
Silia*Prep* CleanDRUG		Strata® Screen-C	EnvirElut® (*Pesticide*)	Isolute® HCX	Chromabond® Drug
Silia*Prep* CleanENVI			EnvirElut® (*Pesticide*)		Chromabond® C18 PAH
Silia*Prep* PAH		Strata® PAH	EnvirElut® (*PAH*)	Isolute® PAH	Chromabond® NH_2/C18
Silia*PrepX* HLB	Oasis® HLB	Strata®-X	Bond Elut® Plexa	Isolute® 101	Chromabond® HLB
Silia*PrepX* DVB		Strata® SDBL	Bond Elut® NEXUS	Evolute® Express ABN	Chromabond® HR-X
Silia*PrepX* SAX	Oasis® MAX	Strata®-X-A	Bond Elut® Plexa PAX	Evolute® Express AX	Chromabond® HR-XA
Silia*PrepX* WAX	Oasis® WAX	Strata®-X-AW		Evolute® Express WAX	Chromabond® HR-XAW
Silia*PrepX* SCX	Oasis® MCX	Strata®-X-C	Bond Elut® Plexa PCX	Evolute® Express CX	Chromabond® HR-XC
Silia*PrepX* WCX	Oasis® WCX	Strata®-X-CW	Bond Elut® NEXUS WCX	Evolute® Express WCX	Chromabond® HR-XCW

Reversed and Normal Phases - Typical Applications

The table below will help you select the right media to purify your compounds of interest, in either reversed-phase or normal phase.

Mode	SiliaPrep Phases	Applications
Reversed-Phases: non-polar sorbents	SiliaPrep C18 (*endcapped, WPD Widepore, nec*)	For organic compounds from water, drugs and metabolites from fluids
	SiliaPrep C8 (*endcapped, nec*)	For extremely non-polar and large compounds (*vitamin D, oils*)
	SiliaPrep Phenyl (*PH*) and Pentafluorophenyl (*PFP*)	For aromatic compounds, complex natural products
Polymeric Reversed-Phases	SiliaPrepX HLB and DVB	For drugs or metabolites from biological fluids, API from tablets and cream
Normal Phases: polar sorbents	SiliaPrep Cyano (*CN*)	For acidic, basic and neutral compounds from aqueous solutions
	SiliaPrep Diol *nec*	For polar compounds from non-polar solvents, structural isomers
	SiliaPrep Florisil and Florisil PR (*Pesticide Residues*)	For chlorinated pesticides, PCB's and polysaccharides
	SiliaPrep Silica and Silica WPD (*Widepore*)	For various compounds from non-polar solvents, structural isomers
	SiliaPrep Alumina (*Acidic, Neutral and Basic*)	For aromatic compounds and aliphatic amines

Experimental Procedures

Generic protocols are presented below, for reversed-phase and normal phase SPE, to help you develop your method depending on the sorbent used, the sample matrix, and the analyte properties.

These are only convenient starting points for method development. Further optimization may be required to tailor the method to the application needs.

Reversed-Phases

Extraction of neutral, acidic and basic organic compounds

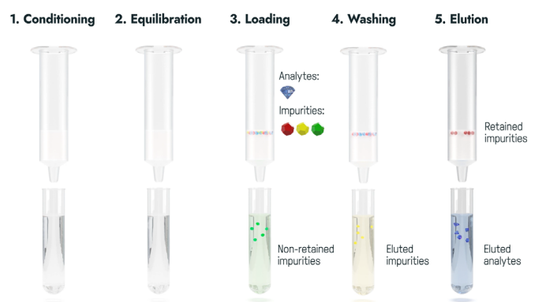
Extraction of neutral, acidic, and basic organic compounds	
CONDITIONING STEP	1 x CV[1] of **Methanol**
EQUILIBRATION STEP	1 x CV of **water**
LOADING STEP	Aqueous sample, **pH** adjusted **2 units above pK_a** (*bases*) or **below pK_a** (*acids*)
WASHING STEP	1 x CV of **5 % Methanol[2] in water**
ELUTION STEP	1 x CV of **Methanol**

Video: The 5 steps of SPE

Normal Phases

Extraction of compounds from non-polar solvents

Extraction of compounds from non-polar solvents	
CONDITIONING STEP	1 x CV of **Isopropanol**
EQUILIBRATION STEP	1 x CV of **Hexane** (*or other low polar solvent*)
LOADING STEP	Sample diluted in **Hexane**
WASHING STEP	1 x CV of **5 % Isopropanol in Hexane**
ELUTION STEP	1 x CV of **50 - 95 % Isopropanol in Hexane**



Notes:

[1] Abbreviation used: CV = Column Volume

[2] For polymeric sorbents used in reversed-phase, you can add up to 60 % Methanol in water during the washing step, if your application requires it.

Ion Exchange Phases - Typical Applications

The table below will help you select the right media according to the pK_a of your analyte.

Mode	SiliaPrep Phases	Applications
Ion Exchange Phases: ionic sorbents	**SiliaPrep SAX and SAX-2 (*TMA Chloride and Acetate*) *nec***	For weakly acidic molecules (pK_a *3 - 5*)
	SiliaPrep Carbonate	For scavenging of TFA, extraction of acids (*boronic acids and acidic phenols*)
	SiliaPrep Amine (*WAX*)	For strongly acidic molecules (pK_a *< 3*), structural isomers, saccharides
	SiliaPrep SCX and SCX-2 (*Tosic and Propylsulfonic Acids*)	For weakly basic molecules (pK_a *7 - 9*), catch and release of amines
	SiliaPrep WCX (*Carboxylic Acid*)	For strongly basic compounds (pK_a *> 9*)
Polymeric Ion Exchange Phases	**SiliaPrepX SAX and WAX**	For acidic compounds and metabolites, highly stable in organic solvents
	SiliaPrepX SCX and WCX	For basic compounds, highly stable in organic solvents

Experimental Procedures

Strong Anion Exchangers (*SAX*)

Extraction of weak acids (pK_a *3 - 5*[3])	
CONDITIONING STEP	1 x CV of **Methanol**
LOADING STEP	Aqueous sample, **pH** adjusted at **7.0 - 8.0**
WASHING STEP	1 x CV of **Methanol** (*elution of basic and neutral compounds*)
ELUTION STEP	1 x CV of **2 - 5 % HCO_2H in Methanol** (*elution of weak acidic compounds*)

Strong Cation Exchangers (*SCX*)

Extraction of weak bases (pK_a *7 - 9*)	
CONDITIONING STEP	1 x CV of **Methanol**
EQUILIBRATION STEP	1 x CV of **water**
LOADING STEP	Aqueous sample, **pH** adjusted at **3.0 - 4.0**
WASHING STEP 1	1 x CV of **water**
WASHING STEP 2	1 x CV of **Methanol** (*elution of acidic and neutral compounds*)
ELUTION STEP	1 x CV of **2 - 5 % NH_4OH[4] in Methanol** (*elution of weak basic compounds*)

Weak Anion Exchangers (*WAX*)

Extraction of strong acids (pK_a *< 3*)	
CONDITIONING STEP	1 x CV of **Methanol**
EQUILIBRATION STEP	1 x CV of **water**
LOADING STEP	Aqueous sample, **pH** adjusted at **4.0 - 5.0**
WASHING STEP 1	1 x CV of **water**
WASHING STEP 2	1 x CV of **Methanol** (*elution of basic and neutral compounds*)
ELUTION STEP	1 x CV of **2 - 5 % NH_4OH[4] in Methanol** (*elution of strong acidic compounds*)

Weak Cation Exchangers (*WCX*)

Extraction of strong bases (pK_a *> 9*)	
CONDITIONING STEP	1 x CV of **Methanol**
EQUILIBRATION STEP	1 x CV of **water**
LOADING STEP	Aqueous sample, **pH** adjusted at **8.0**
WASHING STEP 1	1 x CV of **water**
WASHING STEP 2	1 x CV of **Methanol** (*elution of acidic and neutral compounds*)
ELUTION STEP	1 x CV of **2 - 5 % HCO_2H in Methanol** (*elution of strong basic compounds*)

Notes:

[3] For extraction of Phenol (pK_a *10*), we recommend using a polymeric phase (*SiliaPrepX SAX*) and load the sample with a pH adjusted to 12.

[4] For silica-based sorbents, NH_4OH can be too aggressive. You can use NH_3 (*7M*) in Methanol to avoid degrading the phase.

Specialty Phases and Metal Scavengers - Typical Applications

The table below presents our specialty phases, to remove specific compounds from your samples.

SPE Cartridges and Well Plates Portfolio (*Specialty Phases and Metal Scavengers*)		
Mode	**Silia*Prep* Phases**	**Applications**
Specialty Phases	Silia*Prep* PCB	For extraction of PCB's from waste oil (*hexane extract*)
	Silia*Prep* CleanDRUG	For drugs of abuse applications
	Silia*Prep* CleanENVI	For PAH's, PCB's, herbicides and pesticides from waste waters
	Silia*Prep* PAH	For PAH's from waste waters
Metal Scavengers	Silia*Prep* Cysteine, Diamine, DMT, DOTA, TAAcOH, TAAcONa, Thiol, Thiourea, Imidazole, Triamine	For lowering the residual metal concentration of various metal complexes (*Pd, Pt, Rh, Ru, Ni, Sn, etc*) to single digit ppm

Experimental Procedures

The procedures below are only convenient starting points for method development. Further optimization may be required to tailor the method to your application needs.

Specialty Phases

Extraction of PCBs, drugs and PAHs

PCBs from waste oil with Silia*Prep* PCB	
CONDITIONING STEP	1 x CV[1] of **Hexane**
LOADING STEP	**Diluted sample** (*with* ***Hexane***)
ELUTION STEP	1 x CV of **Hexane**

Drugs of abuse with Silia*Prep* CleanDRUG	
CONDITIONING STEP	1 x CV of **Methanol**
EQUILIBRATION STEP	1 x CV of **water** (*buffered at* ***pH 6.0***)
LOADING STEP	**Aqueous sample** (*buffered at* ***pH 6.0***)
WASHING STEP	1 x CV of **water** then 1 x CV of **Methanol**
ELUTION STEP	1 x CV of **Isopropanol:NH_4OH (*90:10*)**

Environmental samples with Silia*Prep* CleanENVI & PAH	
CONDITIONING STEP	1 x CV of **Dichloromethane** then 1 x CV of **Methanol**
EQUILIBRATION STEP	1 x CV of **water**
LOADING STEP	**Aqueous sample**
WASHING STEP	1 x CV of **5 - 50 % Methanol in water**
ELUTION STEP	1 x CV of **Dichloromethane**

Metal Scavengers

Catch of the metal and release of your analyte

Catch and release of the analyte	
EQUILIBRATION STEP	1 x CV of **sample solvent**
LOADING STEP[2]	**Diluted sample**
RINSING STEP	1 x CV of **sample solvent**

Notes:

[1] Abbreviation used: CV = Column Volume

[2] Non retentive SPE (*Catch and Release*): analyte won't retain on the sorbent and will elute directly during loading and rinsing steps. Scavenged compounds will remain in the SPE cartridge.

Ordering Information

To build your own product number, just add the **Phase** to the **Format PN**

Example:

- SPE-R67530B-06P for Silia*Prep* PFP, 6 mL / 500 mg cartridges

Silica-based Phases

Silia*Prep* Phases	
Phases	**Code**
Reversed-phases	
C18	R00230B
C18 WPD	R33229G
C18 *nec*	R35530B
C8	R31030B
C8 *nec*	R31130B
Phenyl (*PH*)	R34030B
PFP	R67530B
Normal Phases	
Cyano (*CN*)	R38030B
Diol *nec*	R35030B
Florisil	AUT-0014
Florisil LP	AUT-0014LP
Florisil PR	AUT-0015
Silica	R10030B
Silica WPD	R10029G
Acidic Alumina	AUT-0053
Neutral Alumina	AUT-0054
Basic Alumina	AUT-0055
Ion Exchange Phases	
SAX *nec*	R66530B
SAX-2 *nec*	R66430B
Carbonate	R66030B
Amine (*WAX*)	R52030B
SCX	R60530B
SCX-2	R51230B
WCX	R70030B
Scavengers	
Cysteine	R80530B
Diamine	R49030B
DMT	R79030B
Imidazole	R79230B
TAAcOH	R69030B
TAAcONa	R69230B
Thiol	R51030B
Thiourea	R69530B
Triamine	R48030B

Silia*Prep* Formats		
Formats	**Qty/Box**	**Format PN**
Silia*Prep* SPE Cartridges		
1 mL / 50 mg	100	SPE-PHASE-01B
1 mL / 100 mg	100	SPE-PHASE-01C
3 mL / 200 mg	50	SPE-PHASE-03G
3 mL / 500 mg	50	SPE-PHASE-03P
6 mL / 500 mg	50	SPE-PHASE-06P
6 mL / 1 g	50	SPE-PHASE-06S
6 mL / 2 g	50	SPE-PHASE-06U
12 mL / 2 g	20	SPE-PHASE-12U**
25 mL / 5 g*	20	SPE-PHASE-20X**
70 mL / 10 g*	16	FLH-PHASE-70Y
70 mL / 15 g*	16	FLH-PHASE-70i
70 mL / 20 g*	16	FLH-PHASE-70Z
150 mL / 25 g*	10	FLH-PHASE-95K
150 mL / 50 g*	10	FLH-PHASE-95M
150 mL / 70 g*	10	FLH-PHASE-95N
Silia*Prep* 96-Well Plates		
2 mL / 50 mg	1	96W-PHASE-B
2 mL / 100 mg	1	96W-PHASE-C

* Commercialized under Silia*Sep* OT branding. Please see product page here.

** For bare silica, product numbers are FLH-R10030B-15U and FLH-R10030B-25X.

Ordering Information

To build your own product number, just add the **Phase** to the **Format PN**

Examples:

- SPE-P0002-12S for Silia*PrepX* HLB, 12 mL / 500 mg cartridges
- SPEC-R31930B-06S for Silia*Prep* CleanENVI, 6 mL / 1 g cartridges

Polymeric Phases

Silia*PrepX* Phases	
Phase	Code
DVB	P0001
HLB	P0002
SCX	P0005
SAX	P0010
WCX	P0015
WAX	P0020

Silia*PrepX* Formats		
Formats	Qty/Box	Format PN
Silia*PrepX* SPE Cartridges		
1 mL / 30 mg	100	SPE-PHASE-01AA
3 mL / 30 mg	50	SPE-PHASE-03AA
3 mL / 60 mg	50	SPE-PHASE-03BB
6 mL / 100 mg	30	SPE-PHASE-06C
6 mL / 200 mg	30	SPE-PHASE-06G
6 mL / 500 mg	30	SPE-PHASE-06P
12 mL / 500 mg	20	SPE-PHASE-12P
12 mL / 1 g	20	SPE-PHASE-12S
25 mL / 1 g*	20	SPE-PHASE-20S
25 mL / 2 g*	20	SPE-PHASE-20U
70 mL / 5 g*	16	FLH-PHASE-70X
70 mL / 10 g*	16	FLH-PHASE-70Y
Silia*PrepX* 96-Well Plates		
2 mL / 10 mg	1	96W-PHASE-1A
2 mL / 30 mg	1	96W-PHASE-AA
2 mL / 60 mg	1	96W-PHASE-BB

Specialty Phases

Silia*Prep* Specialty Phases	
Phase	Code
PCB	R00650030B
PAH	R0610030B
CleanDRUG	R651230B
CleanENVI	R31930B

Silia*Prep* Specialty Formats			
Formats	Qty/Box	PCB / PAH	CleanDRUG / CleanENVI
Silia*Prep* SPE Cartridges			
1 mL / 50 mg	100	SP2-PHASE-01B	SPEC-PHASE-01B
1 mL / 100 mg	100	SP2-PHASE-01C	SPEC-PHASE-01C
3 mL / 200 mg	50	SP2-PHASE-03G	SPEC-PHASE-03G
3 mL / 500 mg	50	SP2-PHASE-03P	SPEC-PHASE-03P
6 mL / 500 mg	50	SP2-PHASE-06P	SPEC-PHASE-06P
6 mL / 1 g	50	SP2-PHASE-06S	SPEC-PHASE-06S
6 mL / 2 g	50	SP2-PHASE-06U	SPEC-PHASE-06U
12 mL / 2 g	20	SP2-PHASE-12U	SPEC-PHASE-12U
25 mL / 5 g*	20	SP2-PHASE-20X	SPEC-PHASE-20X
70 mL / 10 g*	16	FLH-PHASE-70Y	
70 mL / 15 g*	16	FLH-PHASE-70i	
70 mL / 20 g*	16	FLH-PHASE-70Z	
150 mL / 25 g*	10	FLH-PHASE-95K	
150 mL / 50 g*	10	FLH-PHASE-95M	
150 mL / 70 g*	10	FLH-PHASE-95N	

* Commercialized under Silia*Sep* OT branding. Please see product page here.

SPE Accessories

*Maximize your Productivity with Silia*Prep* Accessories!*

SiliCycle offers various accessories for SPE Cartridges and Well Plates to simplify me, expedite high throughput analysis:

- Vacuum Manifolds
- Empty Tubes
- Adapters and Vacuum Adapters

Silia*Prep* SPE Vacuum Manifolds

Run multiple samples simultaneously, with a controlled flow rate for higher reproducibility, with Silia*Prep* SPE Vacuum Manifolds. These manifolds are available in 12 and 24-Positions configurations and allow consistent extraction. No possibility of cross-contamination from one sample to another.

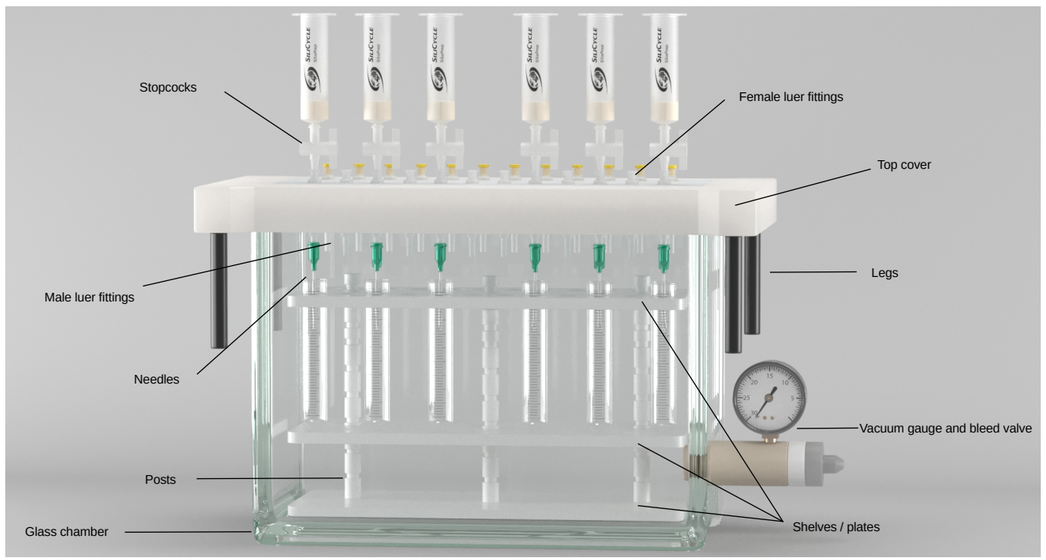
The design consists in a clear glass chamber equipped with replaceable individual stopcocks (*also known as control valves*) and solvent guide needles. The adjustable rack allows the use of a wide variety of collection vessels including 13 and 16 mm test tubes, autosampler vials, and volumetric flasks.

Simply apply a vacuum source to elute sample through a cartridge directly to the collection vessel of choice.

Complete sets include:

- Glass chamber, vacuum gauge, and bleed valve
- Cover, gasket, male, and female luer fittings
- Individual stopcocks and needles
- Collection rack with posts, shelves, and retaining clips.

Silia*Prep* SPE Vacuum Manifolds (*Complete Sets*)	
Product Number	Description
AUT-0128-12	12-Positions Silia*Prep* SPE Vacuum Manifold
AUT-0129-24	24-Positions Silia*Prep* SPE Vacuum Manifold



Silia*Prep* Vacuum Manifold Accessories

Various replacement parts are available for the two Silia*Prep* Vacuum Manifolds offered by SiliCycle.

Silia*Prep* Vacuum Manifold Accessories				
Description	**Pictures**	**12-Positions**	**24-Positions**	
Silia*Prep* Vacuum Manifold Complete Set		AUT-0128-12 (*1/box*)	AUT-0129-24 (*1/box*)	
Spare Parts Ordering Information				
Glass chamber [Dimensions: Length x Width x Height]		AUT-0182-2 (*1/box*) [17.8 x 8.1 x 17 cm]	AUT-0185 (*1/box*) [27.2 x 8.1 x 17.8 cm]	INCLUDED IN COMPLETE SET
Vacuum gauge, valve, and glass chamber kit		AUT-0187 (*1/box*)	AUT-0189 (*1/box*)	INCLUDED IN COMPLETE SET
Top cover, gasket, legs, and polypropylene stopcocks kit		AUT-0313 (*1/box*)	AUT-0315 (*1/box*)	INCLUDED IN COMPLETE SET
Top cover gasket		AUT-0174 (*2/box*)	AUT-0193 (*2/box*)	INCLUDED IN COMPLETE SET
Legs for cover (*black*)		AUT-0329 (*4/box*)	AUT-0329 (*4/box*)	INCLUDED IN COMPLETE SET
Polypropylene stopcocks		AUT-0146 (*12/box*)	AUT-0147 (*24/box*)	INCLUDED IN COMPLETE SET
Polypropylene needles		AUT-0154 (*12/box*)	AUT-0155 (*24/box*)	INCLUDED IN COMPLETE SET
Stainless steel needles*		AUT-0178 (*12/box*)	AUT-0179 (*24/box*)	INCLUDED IN COMPLETE SET
Collection rack (*posts, shelves, and retaining clips*)		AUT-0202 (*1/box*)	AUT-0204 (*1/box*)	INCLUDED IN COMPLETE SET
Female luer fittings		AUT-0326 (*10/box*)	AUT-0326 (*10/box*)	INCLUDED IN COMPLETE SET
Male luer fittings		AUT-0327 (*10/box*)	AUT-0327 (*10/box*)	INCLUDED IN COMPLETE SET
Vacuum manifold plugs (*yellow*)		AUT-0333 (*50/box*)	AUT-0333 (*50/box*)	INCLUDED IN COMPLETE SET

Note: Plates for 13 mm and 16 mm test tubes, for autosampler vials and for volumetric flasks as well as retaining clips are also availble under request. Contact us for more details. * Not included inside the complete set.

Silia*Prep* Waste Containers

Disposable solvent resistant polypropylene containers are available for the 12-Positions manifold. These waste containers greatly simplify sample preparation, solvent disposal, and clean-up. Depending on the nature of the solvent used, the waste container can be reused many times prior to discarding.

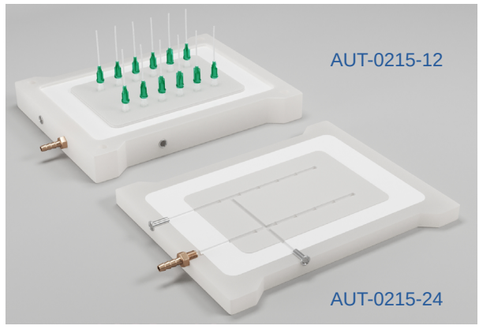
Note: One waste container is included in the 12-Positions complete set. Waste container not available for the 24-Positions vacuum manifold. (*The waste container for the 12-Positions* [15.2 x 8.9 x 12.7 cm] *does not fit in the 24-Positions vacuum manifold*).

AUT-0176 (*10/box*)

Silia*Prep* Drying Manifold Covers

Silia*Prep* Drying Manifold Covers can be used to concentrate samples under vacuum.

Silia*Prep* Drying Manifold Covers	
Product Number	**Description**
AUT-0215-12	12-Positions Silia*Prep* Drying Manifold Cover (*1/box*)
AUT-0215-24	24-Positions Silia*Prep* Drying Manifold Cover (*1/box*)



Silia*Prep* Vacuum Manifolds Assembly and Operating Instructions

Download the complete Silia*Prep* Vacuum Manifolds Assembly and Operating Instructions Guide!

Silia*Prep* Adapters

Enable cartridge stacking and easy SPE cartridge connection with syringe or gas lines (*for positive pressure*).

Silia*Prep* Adapters	
Product Number	**Description**
AUT-0172	Silia*Prep* Adapter for 1, 3, 6 and 12 mL SPE (*12/box*)
AUT-0173	Silia*Prep* Adapter for 25 and 70 mL SPE (*6/box*)

AUT-0172

AUT-0173

Silia*Prep* Vacuum Adapters

Fast, user-friendly, and economical adapters for SPE cartridges. Only a vacuum source is needed.

Silia*Prep* Vacuum Adapter - Flasks		
Joint	**PN**	**Description**
24/40	AUT-0043	24/40 - Silia*Prep* Vacuum Adapter (*1/box*)

AUT-0043

Silia*Prep* Vacuum Adapter - Screw Thread Vials		
Thread	**PN**	**Description**
22/400	AUT-0047	22/400 Vial - Silia*Prep* Vacuum Adapter With Vial Connector (*1/box*)

AUT-0047

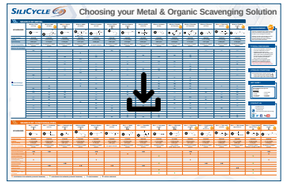
Silia*Prep* Empty Tubes

You can use our Silia*Prep* Empty Tubes to pack your own SPE cartridges with bulk sorbents of your choice.

Silia*Prep* Empty Tubes	
Formats	**Description**
SIM-0007-001	Empty 1 mL SPE tube with 2 frits (*100/box*)
SIM-0008-003	Empty 3 mL SPE tube with 2 frits (*100/box*)
SIM-0002-006	Empty 6 mL SPE tube with 2 frits (*100/box*)
SIM-0003-012	Empty 12 mL SPE tube with 2 frits (*100/box*)
SIM-0004-020	Empty 25 mL SPE tube with 2 frits (*100/box*)
SIM-0006-060	Empty 60 mL SPE tube with 2 frits (*100/box*)
SIM-0009-150	Empty 150 mL SPE tube with 2 frits (*20/box*)

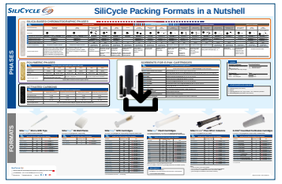
Resource Center

Download our Posters

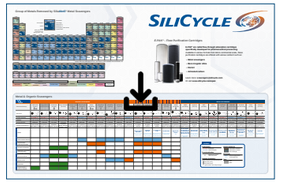


Choosing your metal & organic scavenging solution

SiliCycle's most popular functionalized silicas



SiliCycle packing formats in a nutshell



Functionalized silicas and reference information

Take a Look at some of our Multimedia Contents

Introduction to metal and organic Scavengers

Metal scavenging using bulk Silia*MetS* functionalized silica

How to calculate the amount of scavenger needed

What are the parameters that influence scavenging efficiency?

E-PAK flow purification cartridges

Scale-up impurity scavenging with E-PAK

E-PAK cartridge housings, from lab to commercial scale

See how easy it is working with E-PAK

Flash separation of dye mixture with Silia*Sep* Premium

How does flash chromatography work?

Understanding Column Volume

What is the relationship between retention factor and column volume

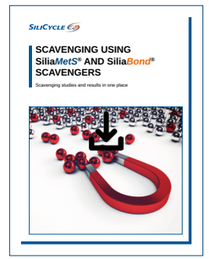
The 5 steps of a solid phase extraction (*SPE*)

Understanding particle size distribution - D50, D90 and D10

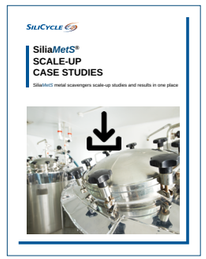
What pH range is suitable for functionalized silica?

What is the sample mass loading capacity of preparative TLC plates?

Get a Copy of our E-Books



A collection of various case studies and application notes using scavengers



A collection of scale-up case studies and application notes using scavengers

SILICYCLE
CERTIFIÉE ISO 9001:2015 CERTIFIED

We Redefine Purity

High Value Silica-based and Specialty Products for Organic Chemistry, Chromatography, and Purification

DISCOVER AND DOWNLOAD OUR BROCHURES

METAL AND ORGANIC SCAVENGING

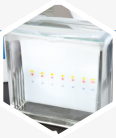
Silia*MetS*® − Metal Scavengers
Silia*Bond*® − Organic Scavengers
E-PAK® − Fixed Bed Flow-Through Purification Cartridges



CHROMATOGRAPHY AND PURIFICATION

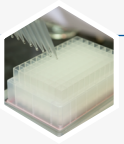
Silia*Flash*® − Irregular Silica Gels | **Silia*Sphere*™ PC** − Spherical Silica Gels
Silia*Bond*® − Chromatographic Phases
Silia*Sep*™ − Flash Cartridges | **Silia*Plate*™** − TLC Plates





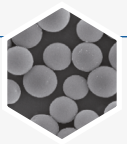
SAMPLE PREPARATION

Silia*Prep*™ − Silica-based SPE Cartridges and Well Plates
Silia*PrepX*™ − Polymeric SPE Cartridges and Well Plates


ANALYTICAL AND PREPARATIVE CHROMATOGRAPHY

Silia*Sphere*™ − Spherical Silica Gels
Silia*Chrom*® − HPLC Columns

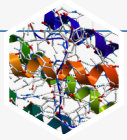

ORGANIC SYNTHESIS

Silia*Bond*® − Reagents and Oxidants
Silia*Cat*® − Heterogeneous Catalysts



PEPTIDE SYNTHESIS

Peptide Synthesis and Purification Solutions
Amine Free Basing and TFA Removal



R&D SERVICES

Metal and Organic Scavenging Screenings | Organic Synthesis
Chromatography and Purification | Material Science
Method Development, Optimization, and Transfer



Technical Support

At SiliCycle, we are committed to providing the best technical support possible.

Our worldwide Technical Support Group of highly qualified M. Sc., Ph. D. Chemists and Engineers will answer your questions and provide solutions to your most advanced chemistry and purification needs. Contact us at support@silicycle.com or **call us**.

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