

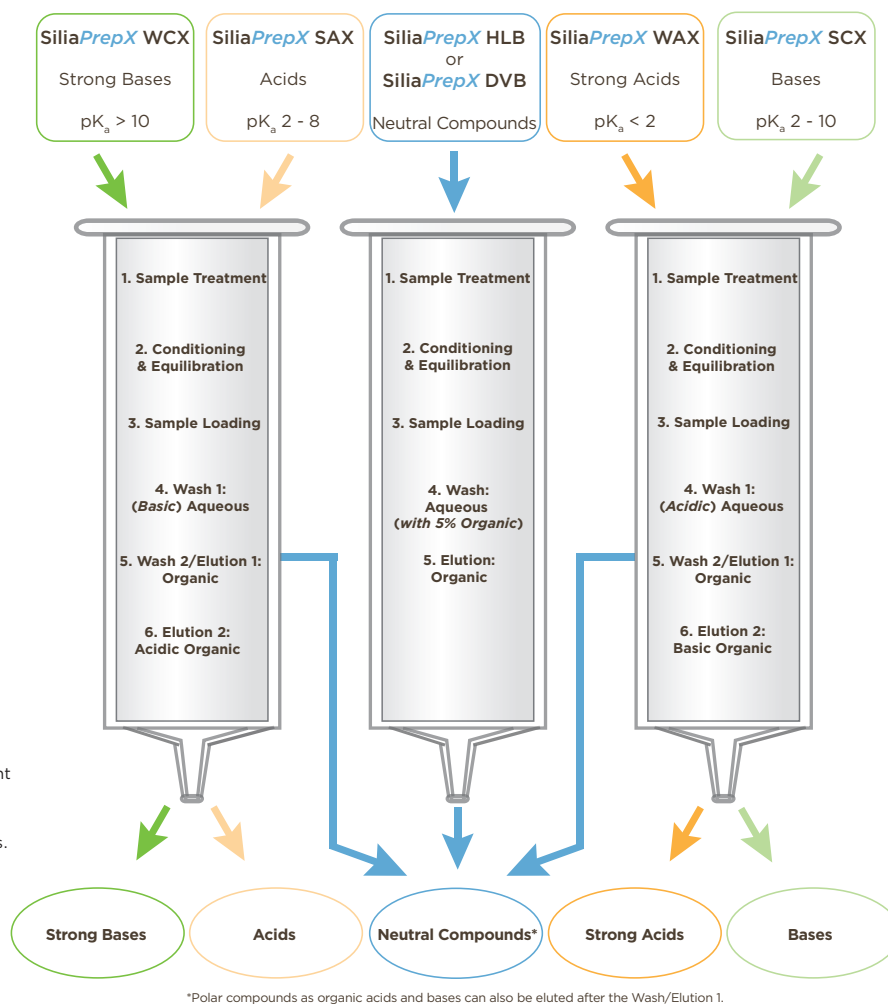
Determination of the Optimal SiliaPrepX Polymeric Phase by a Simple & Logical Method

Follow these simple steps which are outlined in the flow chart (on the right) to determine the optimal SiliaPrepX polymeric phase to use, and achieve a higher recovery and a cleaner extract.

- Determine the classification of the analyte (*neutral, acidic or basic compound*)
- Determine the pK_a of the analyte
- Select the proper SiliaPrepX phase
- Apply the indicated treatment
- Determine recovery by LC analysis

Note: This flow chart is a convenient starting point for method development.

Further optimization may be required to tailor the method to your application needs.



SiliaPrepX Polymeric SPE Cartridge and Well Plate Formats

Formats	Qty/Box	SiliaPrepX HLB	SiliaPrepX DVB	SiliaPrepX SCX	SiliaPrepX SAX	SiliaPrepX WCX	SiliaPrepX WAX
SiliaPrepX SPE Cartridges							
1 mL/30 mg	100	SPE-P0002-01AA	SPE-P0001-01AA	SPE-P0005-01AA	SPE-P0010-01AA	SPE-P0015-01AA	SPE-P0020-01AA
3 mL/60 mg	50	SPE-P0002-03BB	SPE-P0001-03BB	SPE-P0005-03BB	SPE-P0010-03BB	SPE-P0015-03BB	SPE-P0020-03BB
6 mL/100 mg	30	SPE-P0002-06C	SPE-P0001-06C	SPE-P0005-06C	SPE-P0010-06C	SPE-P0015-06C	SPE-P0020-06C
6 mL/200 mg	30	SPE-P0002-06G	SPE-P0001-06G	SPE-P0005-06G	SPE-P0010-06G	SPE-P0015-06G	SPE-P0020-06G
6 mL/500 mg	30	SPE-P0002-06P	SPE-P0001-06P	SPE-P0005-06P	SPE-P0010-06P	SPE-P0015-06P	SPE-P0020-06P
SiliaPrepX 96-Well Plates							
2 mL/10 mg	1	96W-P0002-1A	96W-P0001-1A	96W-P0005-1A	96W-P0010-1A	96W-P0015-1A	96W-P0020-1A
2 mL/30 mg	1	96W-P0002-AA	96W-P0001-AA	96W-P0005-AA	96W-P0010-AA	96W-P0015-AA	96W-P0020-AA

SiliaPrepX™ Polymeric SPE Cartridges & Well Plates Typical Experimental Procedures



As a leader in the industry, SiliCycle is committed to offer the best and most diversified portfolio for analytical chemistry, chromatography and organic chemistry.

The SiliaPrepX family of polymeric SPE cartridges and well plates, have been created to cover the entire spectrum of solid-phase extraction. These advanced polymer sorbents are providing you with a clean extract, which reduce ion suppression and increase the selectivity for LC-MS/MS applications. SiliaPrepX polymeric products are made using state-of-the-art technology giving you the highest quality and the best lot-to-lot reproducibility.



For more information, please visit.

www.silicycle.com/products/siliaprep-x-spe-cartridges-well-plates

General Method Development Procedure Using SiliaPrepX Sorbents

SiliaPrepX HLB

SiliaPrepX HLB is a wettable copolymer presenting a Hydrophilic-Lipophilic Balance (HLB) allowing a strong retention for neutral, acidic and basic compounds and a higher stability in organic solvents.

SiliaPrepX HLB for Neutral, Acidic & Basic Compounds

Conditioning step	1 x Column volume of CH ₃ OH
Equilibration step	1 x Column volume of H ₂ O
Loading step	Dilute sample (with H ₂ O)
Washing step	1 x Column volume of 5% CH ₃ OH in H ₂ O
Elution step	1 x Column of CH ₃ OH

SiliaPrepX DVB

SiliaPrepX DVB is a polystyrene-divinylbenzene copolymer presenting a high hydrophobicity used as a reversed-phase for the extraction of neutral, acidic and basic compounds in viscous matrices.

SiliaPrepX DVB for Neutral, Acidic & Basic Compounds

Conditioning step	1 x Column volume of CH ₃ OH
Equilibration step	1 x Column volume of H ₂ O
Loading step	Dilute sample (with H ₂ O)
Washing step	1 x Column volume of 5% CH ₃ OH in H ₂ O
Elution step	1 x Column of CH ₃ OH

SiliaPrepX SCX

SiliaPrepX SCX is a polystyrene-divinylbenzene copolymer functionalized by a strong cation exchanger presenting a high selectivity for bases (pK_a 2 - 10). It is highly stable in organic solvents.

SiliaPrepX SCX for Basic Compounds (pK_a 2 - 10)

Conditioning step	1 x Column volume of CH ₃ OH
Equilibration step	1 x Column volume of H ₂ O
Loading step	Dilute sample with 1% AcOH in H ₂ O (pH 4-5)
Washing step 1	1 x Column volume of H ₂ O
Washing step 2	1 x Column volume of CH ₃ OH
Elution step	1 x Column of 5% NH ₄ OH in CH ₃ OH

SiliaPrepX WCX

SiliaPrepX WCX is a polystyrene-divinylbenzene copolymer functionalized by a weak cation exchanger used to catch and release strong basic compounds (pK_a > 10). It is highly stable in organic solvents.

SiliaPrepX WCX for Strong Bases (pK_a > 10)

Conditioning step	1 x Column volume of CH ₃ OH
Equilibration step	1 x Column volume of H ₂ O
Loading step	Dilute sample with 5% NH ₄ OH in H ₂ O (pH 7-8)
Washing step 1	1 x Column volume of H ₂ O
Washing step 2	1 x Column volume of CH ₃ OH
Elution step	1 x Column of 2% HCO ₂ H in CH ₃ OH

SiliaPrepX SAX

SiliaPrepX SAX is a polystyrene-divinylbenzene copolymer functionalized by a strong anion exchanger presenting a high selectivity for acids (pK_a 2 - 8). It is highly stable in organic solvents.

SiliaPrepX SAX for Acidic Compounds (pK_a 2 - 8)

Conditioning step	1 x Column volume of CH ₃ OH
Equilibration step	1 x Column volume of H ₂ O
Loading step	Dilute sample with 5% NH ₄ OH in H ₂ O (pH 7-8)
Washing step 1	1 x Column volume of H ₂ O
Washing step 2	1 x Column volume of CH ₃ OH
Elution step	1 x Column of 2% HCO ₂ H in CH ₃ OH

SiliaPrepX WAX

SiliaPrepX WAX is a polystyrene-divinylbenzene copolymer functionalized by a weak anion exchanger used to catch and release strong acidic compounds (pK_a < 2). It is highly stable in organic solvents.

SiliaPrepX WAX for Strong Acid (pK_a < 2)

Conditioning step	1 x Column volume of CH ₃ OH
Equilibration step	1 x Column volume of H ₂ O
Loading step	Dilute sample with 1% AcOH in H ₂ O (pH 4-5)
Washing step 1	1 x Column volume of H ₂ O
Washing step 2	1 x Column volume of CH ₃ OH
Elution step	1 x Column of 5% NH ₄ OH in CH ₃ OH

Note: These procedures are a convenient starting point for method development (format 1 mL/30 mg). In general, SPE protocols tend to be very specific to each molecule. Further optimization may be required to tailor the method to your application needs.