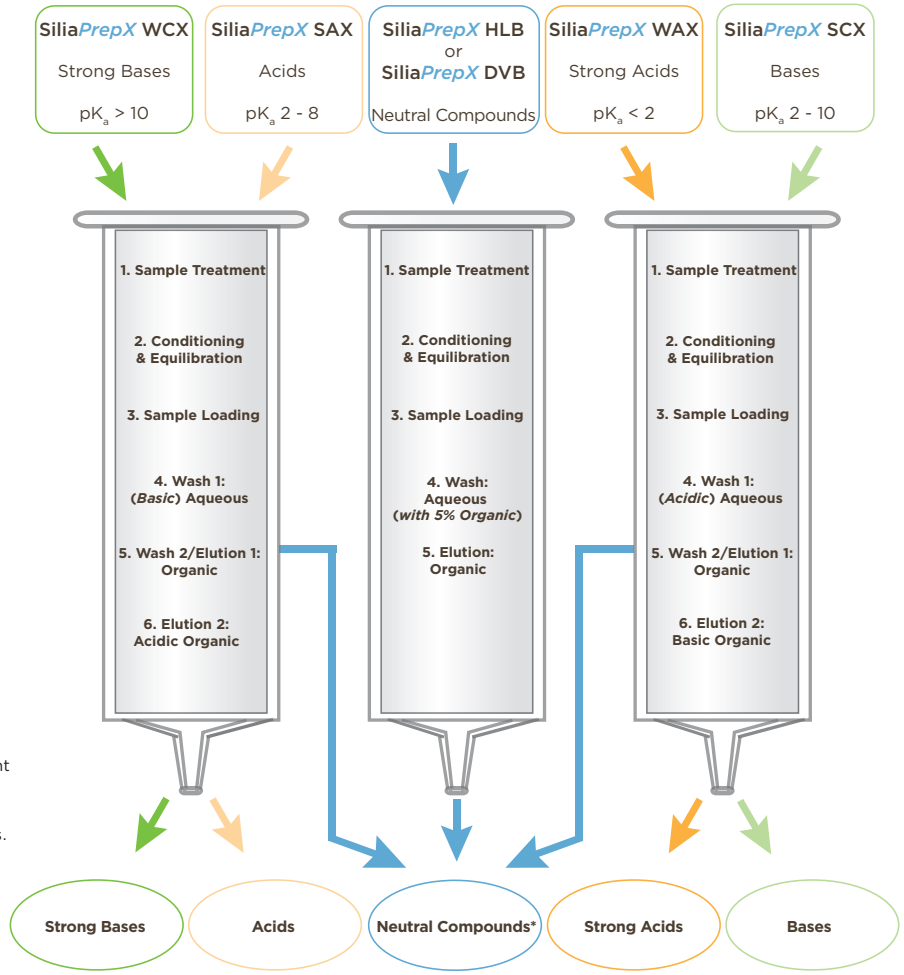
Determination of the Optimal Silia*PrepX* Polymeric Phase by a Simple & Logical Method

Follow these simple steps which are outlined in the flow chart (on the right) to determine the optimal Silia*PrepX* 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 Silia*PrepX* 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.



*Polar compounds as organic acids and bases can also be eluted after the Wash/Elution 1.

Silia*PrepX* Polymeric SPE Cartridge and Well Plate Formats

Formats	Qty/Box	Silia*PrepX* HLB	Silia*PrepX* DVB	Silia*PrepX* SCX	Silia*PrepX* SAX	Silia*PrepX* WCX	Silia*PrepX* WAX
Silia*PrepX* 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
Silia*PrepX* 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

Silia*PrepX*™ 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.

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General Method Development Procedure Using Silia*PrepX* Sorbents

Silia*PrepX* HLB

Silia*PrepX* 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.

Silia*PrepX* HLB for Neutral, Acidic & Basic Compounds	
Conditioning step	1 x Column volume of CH_3OH
Equilibration step	1 x Column volume of H_2O
Loading step	Dilute sample (*with* H_2O)
Washing step	1 x Column volume of 5% CH_3OH in H_2O
Elution step	1 x Column of CH_3OH

Silia*PrepX* SCX

Silia*PrepX* 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.

Silia*PrepX* SCX for Basic Compounds (pK_a *2 - 10*)	
Conditioning step	1 x Column volume of CH_3OH
Equilibration step	1 x Column volume of H_2O
Loading step	Dilute sample with 1% AcOH in H_2O (*pH 4-5*)
Washing step 1	1 x Column volume of H_2O
Washing step 2	1 x Column volume of CH_3OH
Elution step	1 x Column of 5% NH_4OH in CH_3OH

Silia*PrepX* SAX

Silia*PrepX* 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.

Silia*PrepX* SAX for Acidic Compounds (pK_a *2 - 8*)	
Conditioning step	1 x Column volume of CH_3OH
Equilibration step	1 x Column volume of H_2O
Loading step	Dilute sample with 5% NH_4OH in H_2O (*pH 7-8*)
Washing step 1	1 x Column volume of H_2O
Washing step 2	1 x Column volume of CH_3OH
Elution step	1 x Column of 2% HCO_2H in CH_3OH

Silia*PrepX* DVB

Silia*PrepX* 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.

Silia*PrepX* DVB for Neutral, Acidic & Basic Compounds	
Conditioning step	1 x Column volume of CH_3OH
Equilibration step	1 x Column volume of H_2O
Loading step	Dilute sample (*with* H_2O)
Washing step	1 x Column volume of 5% CH_3OH in H_2O
Elution step	1 x Column of CH_3OH

Silia*PrepX* WCX

Silia*PrepX* 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.

Silia*PrepX* WCX for Strong Bases (pK_a *> 10*)	
Conditioning step	1 x Column volume of CH_3OH
Equilibration step	1 x Column volume of H_2O
Loading step	Dilute sample with 5% NH_4OH in H_2O (*pH 7-8*)
Washing step 1	1 x Column volume of H_2O
Washing step 2	1 x Column volume of CH_3OH
Elution step	1 x Column of 2% HCO_2H in CH_3OH

Silia*PrepX* WAX

Silia*PrepX* 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.

Silia*PrepX* WAX for Strong Acid (pK_a *< 2*)	
Conditioning step	1 x Column volume of CH_3OH
Equilibration step	1 x Column volume of H_2O
Loading step	Dilute sample with 1% AcOH in H_2O (*pH 4-5*)
Washing step 1	1 x Column volume of H_2O
Washing step 2	1 x Column volume of CH_3OH
Elution step	1 x Column of 5% NH_4OH in CH_3OH

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.

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