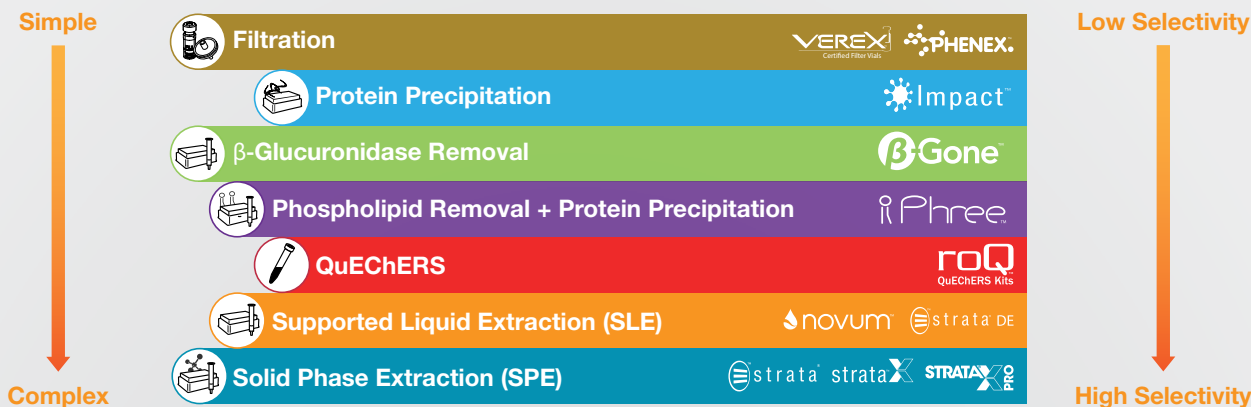


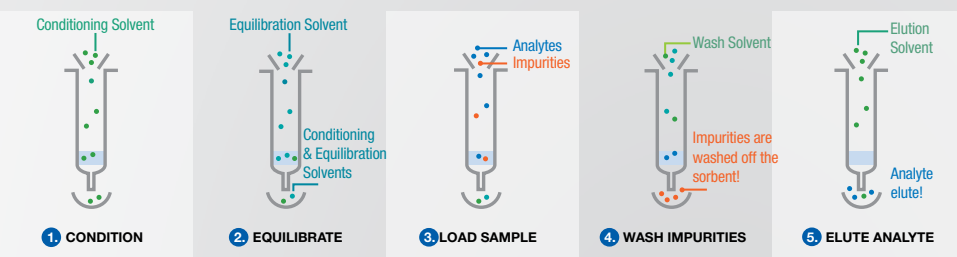
Sample Preparation: Understanding Tips and Tricks to Simplify Your Clean-up

Sample Preparation Techniques



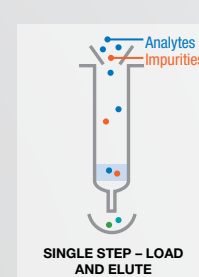
Solid Phase Extraction

Load and Filter Retentive



In traditional SPE, these steps are followed by dry down and reconstitution in the mobile phase.

Non-Retentive SPE Chemical Filter

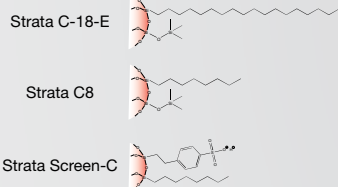


- Pros**
- Single Step
 - Less Optimization
- Cons**
- Not Analyte Specific
 - Cannot Preconcentrate Analyte
 - Cannot Solvent Switch

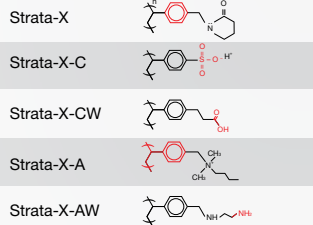
Strata and Strata-X



Silica-based (Traditional)



Polymer-based



Advantages of Silica SPE

- Rigid
- Inexpensive
- Easy to chemically modify

Advantages of Polymeric SPE

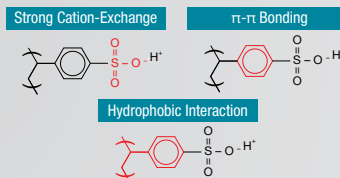
- Multiple modes of interactions: hydrophobic, hydrogen bonding, and π - π interactions
- Easily modified with polar and/or ion-exchange groups
- Large surface area = greater analyte capacity = smaller bed mass
- Broader workable pH range

Mixed-Mode Strata-X Retention Mechanisms

Basic Compounds

Cleanup of weak bases (pK_a 8-10)

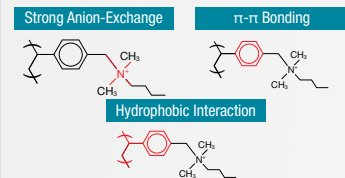
Strata-X-C (33 μ m) and Strata-XL-C (100 μ m)



Acidic Compounds

Cleanup of weak acids (pK_a 2-4)

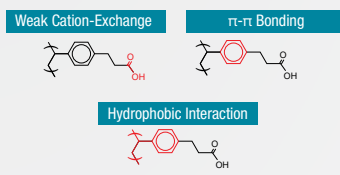
Strata-X-A (33 μ m) and Strata-XL-A (100 μ m)



Basic Compounds

Cleanup of strong bases ($pK_a > 10$)

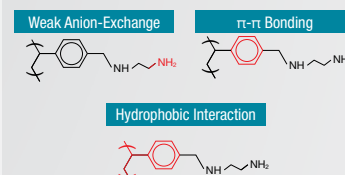
Strata-X-CW (33 μ m) and Strata-XL-CW (100 μ m)



Acidic Compounds

Cleanup of strong acids ($pK_a < 2$)

Strata-X-AW (33 μ m) and Strata-XL-AW (100 μ m)



Strata-X PRO Polymeric Sorbent

Traditional SPE	1. CONDITION Conditioning Solvent	2. EQUILIBRATE Equilibration Solvent	3. LOAD SAMPLE Analytes and Impurities	4. WASH IMPURITIES Wash Solvent	5. ELUTE ANALYTES Elution Solvent
STRATA X PRO RAPID 3 STEPS	X	X	1. LOAD SAMPLE Analytes and Impurities	2. WASH IMPURITIES Wash Solvent	3. ELUTE ANALYTES Elution Solvent
STRATA X PRO SUPER EXPRESS 2 STEPS	NO CONDITION OR EQUILIBRATION STEPS!		1. LOAD SAMPLE Analytes and Impurities	X	2. RINSE Elution Solvent