TAKE CONTROL OF YOUR SAMPLES

Agilent Bond Elut Plexa Polymeric SPE

Complex biological samples, such as plasma, are highly variable. But with Agilent Bond Elut Plexa SPE, you can reduce variability and simplify your analysis.

Bond Elut Plexa SPE eliminates common matrix interferences with a unique combination of hydroxylated exterior, hydrophobic interior, and advanced polymerization. What's more, the lot-to-lot reproducibility of Bond Elut Plexa ensures optimal and consistent flow rates, recovery, and cleanliness, which improve performance and simplify workflows.

For more information, or to order now, visit
www.agilent.com/chem/samplepreparation

Choosing the right sorbent for your analytes

Analyte Type	Bond Elut Plexa Phase	Mechanism of Separation	Loading Solvent	Eluting Solvent
Acidic, basic, neutral Log P >1.5 pKa 3-6 (acidic load) pKa 6-10 (basic load)	Plexa	Polymeric Reversed-Phase (hydrophobic-hydrophilic)	Water or buffer	Intermediate P' e.g. MeOH, ACN
Ionic (ionizable), basic Log P> 0.8 pKa 6-10	Plexa PCX	Polymeric Cation Exchange (Strong)	Water or buffer (pH =pKa-2)	• Buffer (pH=pKa+2) • pH value where analyte is neutral • Buffer with high ionic strength
Ionic (ionizable), acidic Log P > 1.0 pKa < 5	Plexa PAX	Polymeric Anion Exchange (Strong)	Water or buffer (pH = pKa+2)	• Buffer (pH=pKa-2) • pH value where analyte is neutral • Buffer with high ionic strength

Confidently clean samples and elute analytes

Bond Elut Plexa Polymeric SPE Protocol

	ACIDS	NEUTRALS		BASES
Analyte	LogP > 1.0 pKa < 5	LogP > 1.5 pKa 3-6 pKa 6-10		LogP > 0.8 pKa 6-10
	PLEXA PAX	**PLEXA** Acid Load Method	**PLEXA** Base Load Method	**PLEXA PCX**
Sample Pre-treatment	2% NH$_4$OH	1% HCO$_2$H	2% NH$_4$OH	2% H$_3$PO$_4$
Sorbent Condition	100% MeOH	100% MeOH		100% MeOH
Equilibration	100% H$_2$O	100% H$_2$O		100% H$_2$O
Load		Apply pre-treated sample		
Wash	100% H$_2$O	5% MeOH in H$_2$O		2% HCO$_2$H in H$_2$O
Elution 1/Wash 2	100% MeOH Neutrals	100% MeOH Neutrals		1:1 MeOH/ACN Acids, Neutrals
Elution 2	5% HCO$_2$H in MeOH Acids			5% NH$_3$ in 1:1 MeOH/ACN Bases
Analysis		Prepare extracts for instrumental analysis		

Elution profile: 10-bottle optimization

Testing 10 wash solutions with varying levels of % organic, then checking each eluent fraction, helps you evaluate where the optimal % elution composition of your target analyte occurs, relative to unwanted contaminants. 10-bottle optimization is an excellent starting point for SPE method development, either from scratch or with an existing method. See it in action in the video below.

Simple Approaches to SPE Method Development

Mass Balance and 10-Bottle Optimization

Familiarize yourself with this simple approach to SPE method development in addition to tricks and tips to boost your productivity.

View now at: **www.agilent.com/chem/simple-spe**

Troubleshooting Tips

Having problems with your method, or working with a new method? Try these suggestions:
• Perform the SPE method on a standard (or standard mix) first
• Collect fractions at every step (load, wash, elute)
• Evaporate and reconstitute all collected fractions
• Analyze every fraction
• If analytes appear in fractions other than the elution fraction:
  • In load: Lower the organic percentage, adjust pH, and/or change the SPE sorbent (increase bed mass) or sorbent material
  • In wash: Lower the organic percentage and adjust pH

Bond Elut Plexa SPE
Ordering Information

Bond Elut Plexa

Description	Unit	Part No.
Straight Barrel Cartridges		
30 mg, 1 mL	100/pk	12109301
30 mg, 3 mL	50/pk	12109303
60 mg, 1 mL	100/pk	12109601
60 mg, 3 mL	50/pk	12109603
200 mg, 3 mL	50/pk	12109610
200 mg, 6 mL	30/pk	12109206
500 mg, 6 mL	30/pk	12259506
Bond Elut Jr		
200 mg	50/pk	12169610B
Mega Bond Elut Plexa		
500 mg, 12 mL	20/pk	327832
96-Well Plates		
10 mg, 1 mL	1/pk	A4969010
30 mg, 1 mL	1/pk	A4969030
10 mg, 2 mL	1/pk	A3969010
30 mg, 2 mL	1/pk	A3969030

Bond Elut Plexa PCX

Description	Unit	Part No.
Straight Barrel Cartridges		
30 mg, 1 mL	100/pk	12108301
60 mg, 1 mL	100/pk	12108601
30 mg, 3 mL	50/pk	12108303
60 mg, 3 mL	50/pk	12108603
200 mg, 6 mL	30/pk	12108206
500 mg, 6 mL	30/pk	12258506
96-Well Plates		
10 mg, 1 mL	1/pk	A4968010
30 mg, 1 mL	1/pk	A4968030
10 mg, 2 mL	1/pk	A3968010
30 mg, 2 mL	1/pk	A3968030

Bond Elut Plexa PAX

Description	Unit	Part No.
Straight Barrel Cartridges		
30 mg, 1 mL	100/pk	12107301
60 mg, 1 mL	100/pk	12107601
30 mg, 3 mL	50/pk	12107303
60 mg, 3 mL	50/pk	12107603
200 mg, 6 mL	30/pk	12107206
500 mg, 6 mL	30/pk	12257506
96-Well Plates		
10 mg, 1 mL	1/pk	A4967010
30 mg, 1 mL	1/pk	A4967030
10 mg, 2 mL	1/pk	A3967010
30 mg, 2 mL	1/pk	A3967030

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Perform confident quantitation and streamline your analytical workflow with improved sensitivity, precision, and scan speed.

Agilent 6230 LC/MS TOF
Detect both targets and unknowns with greater accuracy, and use enhanced MassHunter Workstation software to mine and analyze data.

Agilent 6545 LC/MS Q-TOF
Obtain better answers, faster with resolving power and sensitivity on the order of five times higher than previous generations.

The importance of SPE on instrumentation

Use SPE to remove common matrix background from your samples. This will minimize interfering peaks, reduce matrix effects to maximize sensitivity, reduce maintenance, and increase instrument lifetime by preventing contamination.

Agilent Technologies