

LESS VARIABILITY
MORE CONSISTENT OUTCOMES

Bond Elut Plexa SPE for Pharmaceutical Applications

Complicated biological samples, such as plasma, contain a significant amount of proteins and lipids. They can also vary in viscosity, debris, and other factors.

**You can't change your samples...
but you can change your outcomes
with Bond Elut Plexa SPE products**

Bond Elut Plexa SPE minimizes variability and unknowns inherent to biological samples. The novel hydroxylated exterior, hydrophobic interior, and advanced polymer architecture work together to improve extraction performance and remove interferences that can affect your data and your instrument.

In addition, our stringent quality-control process ensures lot-to-lot consistency to maximize flow rates, recovery, and extract cleanliness.



Designed for simplicity: Bond Elut Plexa SPE eliminates common matrix background, improving sensitivity, accuracy, and precision.

For research use only. Not for use in diagnostic procedures.



FREE SPE Methodology Toolkit

Learn how to perform efficient, effective extractions across a wide range of compound classes. Kit includes:

- Bond Elut Plexa Method Development Poster
- How-to videos:
 - SPE Overview
 - Simple Approaches to SPE Method Development
 - Streamline SPE with Agilent VersaPlate

Request your toolkit:

www.agilent.com/chem/spe-kit

ACCURACY AND PRECISION START WITH SUPERIOR POLYMERIC SPE

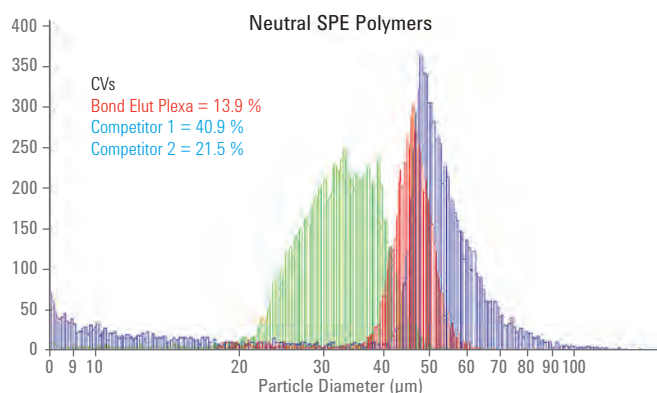
Exceptional quality, exceptional results

Routine quality monitoring ensures reproducible lot-to-lot performance—and minimal variability in your analysis.

As instruments have become more selective and sensitive, Agilent manufacturing standards have evolved as well. Our multi-step quality assurance (QA) and quality control (QC) processes, covered under our ISO 9001:2008 compliant quality management system, minimize variability and deliver the consistency, reliability, and robustness you expect.

Particle size distribution and bed compression are controlled to ensure lot-to-lot and well-to-well consistency. This ensures that the flow is optimized to maximize productivity without analyte loss.

Bond Elut Plexa particle distribution



Tight control of particle size distribution ensures consistent flow. Agilent Bond Elut Plexa sorbent particles are nearly mono-dispersed in size, resulting in homogeneous packing, higher bed packing efficiency, and more consistent performance.

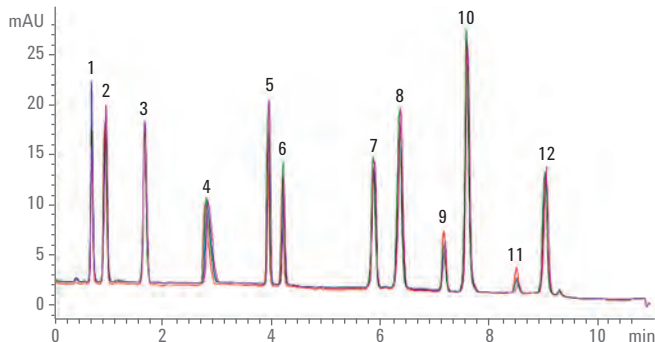
Consistent results for complex biological samples

Knowing that recoveries will be consistent from one lot to the next is critical to your success. That is why Bond Elut Plexa SPE products are checked for recoveries across lot-to-lot, and over time—removing another variable that can cause problems for your lab.

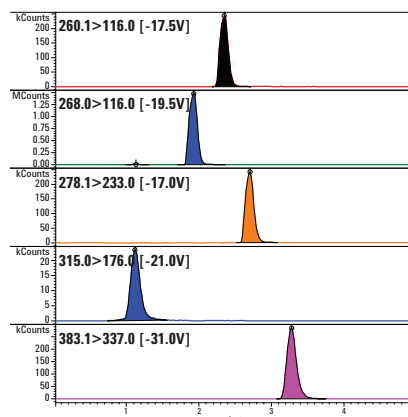
Bond Elut Plexa lot-to-lot comparison

Consistent results: This overlay represents reverse-phase LC test results of four separate lots of Plexa, from a range of approximately 6 years.

- | | | | |
|------------------|----------------|-------------------|------------------|
| 1. Procainamide | 4. Metoprolol | 7. Carbaryl | 10. Ketoprofen |
| 2. Ranitidine | 5. Propranolol | 8. Hydrocortisone | 11. Acenaphthene |
| 3. Acetaminophen | 6. Quetiapine | 9. Naphthalene | 12. Diclofenac |



Maximum recovery and sensitivity: Determination of non-polar basic compounds in human plasma using Bond Elut Plexa PCX for SPE. Efficient retention and elution of target analytes on Plexa sorbent result in excellent recoveries by LC/MS. Cleaner samples minimize ion suppression.



All compounds at 500 ng/mL.

Higher recoveries, plus data you can trust



Better recovery and reproducibility: Samples at two different concentration levels were prepared using Bond Elut Plexa PCX. Low RSDs and high recoveries were consistently reproduced at both levels.

Non-polar basic compounds from human plasma

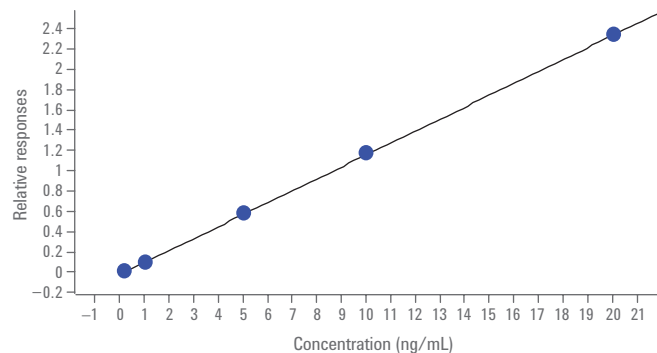
Analyte	log P	pKa	% Rec ¹ (500 ng/mL)	% RSD ²	% Rec ¹ (1,000 ng/mL)	% RSD ²
Ranitidine	1.9	8.2	101	5	94	6
Propranolol	3.6	9.5	97	7	92	4
Amitriptyline	4.6	9.4	95	5	91	5
Loratadine	5.2	9.3	100	4	91	4

¹Recoveries calculated as % of signal intensity of an extracted sample compared to that calibration curve.

²RSD = standard deviation/average recovery x 100; n = 6.

Excellent accuracy and precision across each analyte concentration level

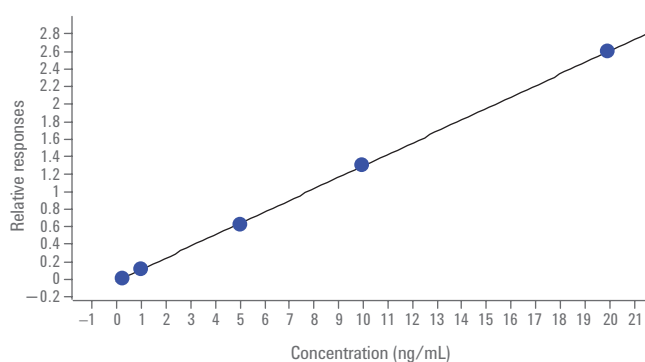
Accuracy and % CV data collected for five samples of whole blood fortified with 1 ng/mL of each analyte



BUP calibration curve in whole blood extract

$$y = 0.117526 * x - 0.002649$$

$$R^2 = 0.99997503$$



NBUP calibration curve in whole blood extract

$$y = 0.129907 * x - 0.010709$$

$$R^2 = 0.99995931$$

Figure shows the calibration linearity of Buprenorphine (BUP) and Norbuprenorphine (NBUP) across concentration levels of 0.2 ng/mL to 20 ng/mL

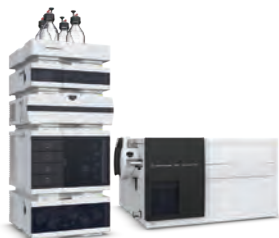
Method validation at 1 ng/mL of each analyte, n = 5

	Accuracy (%)	CV %
Buprenorphine (BUP)	94.2	0.6
Norbuprenorphine (NBUP)	103	0.2

Combine Agilent Bond Elut Plexa SPE with Agilent LC/MS for unsurpassed performance

To minimize interfering peaks, reduce ion suppression, and protect instrument parts from harmful contaminants—use Agilent Bond Elut SPE to remove common matrix background from your samples. Confidently perform discovery, quantitation, and target compound analysis with Agilent LC/MS systems.

Solid LC/MS, confident quantitation **Agilent 6470 QQQ LC/MS**



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

Analyze without compromise **Agilent 6230 LC/MS TOF**



Detect both targets and unknowns with greater accuracy, and use enhanced MassHunter Workstation software to mine and analyze data.

Better, faster, easier answers **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.

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

To learn more, and request your free SPE methodology toolkit, visit:
www.agilent.com/chem/spe-kit

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