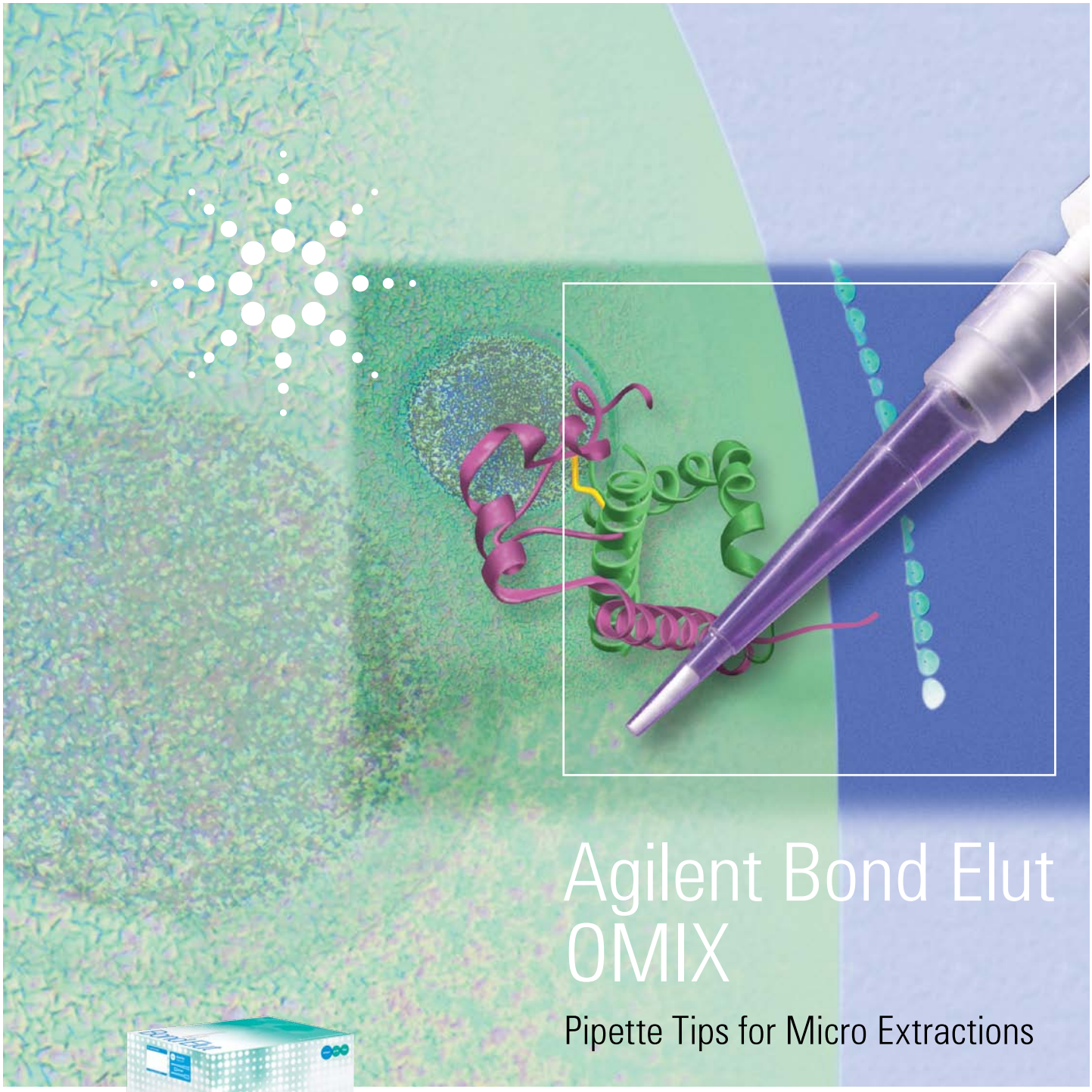


Agilent Bond Elut OMIX

Pipette Tips for Micro Extractions

Primer

C4, C18 and SCX

10 µL and 100 µL pipette tips

The Measure of Confidence

Agilent Technologies

Agilent Bond Elut OMIX

Contents

Agilent Bond Elut OMIX

Bond Elut OMIX pipette tips reliably purify and enrich femtomole and picomole levels of peptides and proteins before MALDI-TOF or LC/MS/MS analysis.

The unique monolithic sorbent technology used in Bond Elut OMIX consistently outperforms other tips by delivering uniform flow and strong analyte-to-surface interactions. The superior flow and exceptional binding capacity of Bond Elut OMIX provide improved precision, better sequence coverage, and increased recovery of your peptides for more accurate protein identification.

Bond Elut OMIX tips contain a small bed of reversed-phase or ion-exchange monolithic sorbent inserted in a 10 µL or 100 µL pipette tip. This miniaturized SPE (solid phase extraction) bed accommodates the micro-liter loading and elution volumes required by proteomic scientists with volume-limited samples.

The Bond Elut OMIX range includes:

- C4 and C4MB (MiniBed[1]) – reversed-phase functional C4 group with reduced retention and hydrophobicity
- C18 and C18MB – reversed-phase C18 functional group for increased retention
- SCX and SCXMB – strong cation-exchange functionality for basic proteins

C18 is typically used for protein digests, but is not suitable for larger intact proteins, which are more hydrophobic than the peptides in protein digests. They therefore bind too tightly to C18 and are difficult or impossible to elute, leading to little or no recovery. Less hydrophobic C4 membranes, however, should allow for successful purification and concentration of larger proteins.

Reversed-phase resins such as C4 and C18 are very effective for salt removal, but can be less effective in removing detergents. Strong cation-exchange (SCX) materials are much more proficient in removing detergents, in addition to providing an effective alternative for salt removal and sample concentration.

Bond Elut OMIX sorbent material specifications

Description	Specification
Material composition	glass-fiber-supported functionalized monolithic silica sorbent
Surface area	650 m^2/g
Tip volume	10 µL
MiniBed volume	100 µL
Elution volume	2 to 10 µL
MiniBed elution volume	0.5 to 2 µL
Bed volume	1.0 µL
MiniBed bed volume	0.5 µL
Interstitial volume	0.4 µL
MiniBed interstitial volume	0.18 µL
Bed mass	8.0 µg
MiniBed bed mass	2.0 µg
pH stability	1 to 10
Recommended storage conditions	15 to 30 °C (59 to 86 °F)

Bond Elut OMIX tip housing specifications

Description	Specification
Volume	10 and 100 µL
Tip length	29 mm
Tip id top	4.5 mm
Tip od top	5.8 mm

[1] MiniBed versions contain about 1/3rd the sorbent material of the standard product. MiniBed achieves lower elution volumes, typically 0.5 to 2.0 µL, for maximum enrichment and sensitivity.

Pipettor compatibility

Bond Elut OMIX pipette tips feature a standard 10 µL tip housing that is compatible with most P10 single channel and multichannel pipettors. Bond Elut OMIX has been validated on pipettors from:

- Eppendorf Research
- Gilson P10
- Rainin
- Oxford
- Finnpipette multichannel
- VWR single and multichannel pipettors

Robot compatibility

Bond Elut OMIX meets tip-rack standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004, as developed by the American National Standards Institute and the Society for Biomolecular Sciences (now Society for Laboratory Automation and Screening). The SLAS footprint is standard for all liquid handling systems.

Preparing solutions

Always wear gloves and eye protection when handling organic liquids. Read and take heed of information in Material Safety Data Sheets supplied by the manufacturers

Reagents

The best Bond Elut OMIX results are achieved when high quality reagents are used and the solutions are stored appropriately. Use these reagents to prepare the solutions for Bond Elut OMIX.

- Water, HPLC grade
- Acetonitrile (ACN), HPLC grade
- Formic acid
- Glacial acetic acid, molecular biology grade
- Trifluoroacetic acid (TFA)
- Heptafluorobutyric acid (HFBA)

Solution recipes

These solutions are prepared in 100 mL aliquots, sufficient to purify thousands of peptide samples.

Washing solutions

1% HFBA
Add 1 mL concentrated HFBA to a 100 mL volumetric flask and make up to the mark with HPLC-grade water. Mix thoroughly.

0.1% TFA
Add 0.1 mL concentrated TFA to a 100 mL volumetric flask and make up to the mark with HPLC-grade water. Mix thoroughly.

Conditioning solution

50% ACN/water
Add 50 mL acetonitrile to 50 mL HPLC-grade water. Mix thoroughly.

Elution solvents for reversed-phase C18 and C4 OMIX tips

For MALDI-TOF analysis: 50% ACN/water/0.1% TFA
Add 50 mL acetonitrile and 0.1 mL concentrated TFA to a 100 mL volumetric flask, and make up to the mark with HPLC-grade water. Mix thoroughly.

The MALDI matrix may also be combined with this solution to directly spot matrix and sample onto the MALDI plate.

For LC/MS or LC/MS/MS analysis: 50% ACN/water/0.1% formic acid or acetic acid
Add 50 mL acetonitrile and 0.1 mL formic acid or acetic acid to a 100 mL volumetric flask. Make up to the mark with HPLC-grade water and mix thoroughly.

Elution solvents for ion-exchange SCX OMIX tips

For MALDI-TOF and LC/MS/MS analysis: 5% ammonium hydroxide in 30% methanol
Add 5 mL ammonium hydroxide and 30 mL methanol to a 100 mL volumetric flask. Make up to the mark with HPLC-grade water. Mix thoroughly.

Generic methods for Bond Elut OMIX tips

These pipette tips use the principle of reversed-phase chromatography or ion-exchange chromatography to desalt peptide and protein samples prior to MALDI-TOF or LC/MS/MS.

The tip is conditioned with wetting and equilibration solutions to ensure optimum binding. During sample application, the peptides and proteins have a strong affinity for the Bond Elut OMIX hydrophobic monolithic silica surface. Salts, detergents and other hydrophilic contaminants present from proteolytic digests pass through the tip unretained. Residual contaminants that are weakly bound to the Bond Elut OMIX sorbent material are washed from the tip with a slightly acidic water rinse. The target peptides are recovered in their concentrated and purified form with a slightly acidic, aqueous-organic solvent.

Bond Elut OMIX tips	
1. Pretreat Sample	Adjust sample with HFBA or TFA.
2. Condition	Aspirate with conditioning solution and discard solvent. Repeat.
3. Equilibrate	Aspirate with washing solution (HFBA or TFA) and discard solvent. Repeat.
4. Bind Sample	Aspirate pre-treated sample into Bond Elut OMIX tip. Dispense and aspirate sample 3 to 5 times for maximum efficiency. Up to 10 cycles may be used for improved binding. Dispense to waste.
5. Purify/desalt	Aspirate with washing solution (HFBA or TFA) and discard solvent. Repeat.
6. Elute	MALDI-TOF analysis: Aspirate with TFA/ACN or ammonium hydroxide/methanol, with or without matrix and dispense directly onto a MALDI plate. LC/MS or LC/MS/MS analysis: Aspirate with formic acid/ammonium hydroxide/methanol or acetic acid/ammonium hydroxide/methanol and dispense into an autosampler vial or well plate.

Hints and tips

Don't introduce air through the membrane during any part of the procedure, to ensure optimum flow and peptide recovery.

Specific method for C18 and C18MB 10 µL and 100 µL pipette tips

Washing solution: **1% heptafluorobutyric acid (HFBA)**

Conditioning solution: **50:50 acetonitrile:water**

	10 µL tip	10 µL MB tip	100 µL tip
Pretreat sample	Adjust sample to ~ 0.1% to 0.5% HFBA		
Condition tip	Set pipettor at 10 µL and securely attach a Bond Elut OMIX C18 or C18MB tip. Aspirate 10 µL of conditioning solution and discard solvent. Repeat. Keep pipette plunger depressed and move to equilibration step.		Set pipettor at 100 µL and securely attach a Bond Elut OMIX C18 tip. Aspirate 100 µL of conditioning solution and discard solvent. Repeat. Keep pipette plunger depressed and move to equilibration step.
Equilibrate tip	Aspirate 10 µL washing solution and discard. Repeat. Keep pipette plunger depressed and move to sample binding step.		Aspirate 100 µL washing solution and discard. Repeat. Keep pipette plunger depressed and move to sample binding step.
Bind sample	Aspirate up to 10 µL of pre-treated sample into tip. Dispense and aspirate sample 3 to 5 cycles for maximum efficiency. Up to 10 cycles may be used for improved binding. Dispense sample into a waste vial. Keep pipette plunger depressed and move to purification step.		Aspirate between 10 and 100 µL of pre-treated sample into tip. Dispense and aspirate sample 3 to 5 cycles for maximum efficiency. Up to 10 cycles may be used for improved binding. Dispense sample into a waste vial. Keep pipette plunger depressed and move to purification step.
Purify/desalt	Aspirate 10 µL of washing solution and discard solvent. Repeat 2 to 4 times. Keep pipette plunger depressed and move to elution step.		Aspirate 100 µL of washing solution and discard solvent. Repeat 2 to 4 times. Keep pipette plunger depressed and move to elution step.
Elute	For MALDI analysis: Aspirate 2 to 10 µL 0.1% TFA in 50 to 70% ACN, with or without matrix. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 2 to 10 µL 0.1% formic acid or 0.1% acetic acid in 50 to 75% ACN or methanol.	For MALDI analysis: Aspirate 0.5 to 2 µL 0.1% TFA in 50 to 70% ACN, with or without matrix. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 0.5 to 2 µL 0.1% formic acid or 0.1% acetic acid in 50 to 75% ACN or methanol.	For MALDI analysis: Aspirate at least enough 0.1% TFA in 50 to 70% ACN, with or without matrix, to completely immerse tip bed (~ 5 µL) or up to 100 µL. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 5 to 100 µL 0.1% formic acid or 0.1% acetic acid in 50 to 75% ACN or methanol.

Specific method for C4 and C4MB 10 µL and 100 µL pipette tips

Washing solution: **0.1% trifluoroacetic acid (TFA)**

Conditioning solution: **50:50 acetonitrile:water**

	10 µL tip	10 µL MB tip	100 µL tip
Pretreat sample	Adjust sample to ~ 0.1% trifluoroacetic acid		
Condition tip	Set pipettor at 10 µL and securely attach a Bond Elut OMIX C4 or C4MB tip. Aspirate 10 µL of conditioning solution and discard solvent. Repeat. Keep pipette plunger depressed and move to equilibration step.		Set pipettor at 100 µL and securely attach a Bond Elut OMIX C4 tip. Aspirate 100 µL of conditioning solution and discard solvent. Repeat. Keep pipette plunger depressed and move to equilibration step.
Equilibrate tip	Aspirate 10 µL washing solution and discard. Repeat. Keep pipette plunger depressed and move to sample binding step.		Aspirate 100 µL washing solution and discard. Repeat. Keep pipette plunger depressed and move to sample binding step.
Bind sample	Aspirate up to 10 µL of pre-treated sample into tip. Dispense and aspirate sample 3 to 5 cycles for maximum efficiency. Up to 10 cycles may be used for improved binding. Dispense sample into a waste vial. Keep pipette plunger depressed and move to purification step.		Aspirate between 10 and 100 µL of pre-treated sample into tip. Dispense and aspirate sample 3 to 5 cycles for maximum efficiency. Up to 10 cycles may be used for improved binding. Dispense sample into a waste vial. Keep pipette plunger depressed and move to purification step.
Purify/desalt	Aspirate 10 µL of washing solution and discard solvent. Repeat 2 to 4 times. Keep pipette plunger depressed and move to elution step.		Aspirate 100 µL of washing solution and discard solvent. Repeat 2 to 4 times. Keep pipette plunger depressed and move to elution step.
Elute	For MALDI analysis: Aspirate 2 to 10 µL 0.1% TFA in 50 to 95% ACN, with or without matrix. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 2 to 10 µL 0.1% formic acid or 0.1% acetic acid in 75 to 95% ACN or methanol.	For MALDI analysis: Aspirate 0.5 to 2 µL 0.1% TFA in 50 to 95% ACN, with or without matrix. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 0.5 to 2 µL 0.1% formic acid or 0.1% acetic acid in 75 to 95% ACN or methanol.	For MALDI analysis: Aspirate at least enough 0.1% TFA in 50 to 95% ACN, with or without matrix, to completely immerse tip bed (~ 5 µL) or up to 100 µL. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 5 to 100 µL 0.1% formic acid or 0.1% acetic acid in 75 to 95% ACN or methanol.

Specific method for SCX and SCXMB 10 µL and 100 µL pipette tips

Washing solution: **0.1% trifluoroacetic acid (TFA)**

Conditioning solution: **50:50 acetonitrile:water**

	10 µL tip	10 µL MB tip	100 µL tip
Pretreat sample	Adjust sample to ~ 0.1% trifluoroacetic acid		
Condition tip	Set pipettor at 10 µL and securely attach a Bond Elut OMIX SCX or SCXMB tip. Aspirate 10 µL of conditioning solution and discard solvent. Repeat. Keep pipette plunger depressed and move to equilibration step.		Set pipettor at 100 µL and securely attach a Bond Elut OMIX SCX tip. Aspirate 100 µL of conditioning solution and discard solvent. Repeat. Keep pipette plunger depressed and move to equilibration step.
Equilibrate tip	Aspirate 10 µL washing solution and discard. Repeat. Keep pipette plunger depressed and move to sample binding step.		Aspirate 100 µL washing solution and discard. Repeat. Keep pipette plunger depressed and move to sample binding step.
Bind sample	Aspirate up to 10 µL of pre-treated sample into tip. Dispense and aspirate sample 3 to 5 cycles for maximum efficiency. Up to 10 cycles may be used for improved binding. Dispense sample into a waste vial. Keep pipette plunger depressed and move to purification step.		Aspirate between 10 and 100 µL of pre-treated sample into tip. Dispense and aspirate sample 3 to 5 cycles for maximum efficiency. Up to 10 cycles may be used for improved binding. Dispense sample into a waste vial. Keep pipette plunger depressed and move to purification step.
Purify/desalt	Aspirate 10 µL of washing solution and discard solvent. Repeat 2 to 4 times. Keep pipette plunger depressed and move to elution step.		Aspirate 100 µL of washing solution and discard solvent. Repeat 2 to 4 times. Keep pipette plunger depressed and move to elution step.
Elute	For MALDI analysis: Aspirate 2 to 10 µL 5% ammonium hydroxide in 30% methanol, with or without matrix. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 2 to 10 µL 5% ammonium hydroxide in 30% methanol. Dilute with acid or dry down and reconstitute in mobile phase before analysis.	For MALDI analysis: Aspirate 0.5 to 2 µL 5% ammonium hydroxide in 30% methanol , with or without matrix. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 0.5 to 2 µL 5% ammonium hydroxide in 30% methanol. Dilute with acid or dry down and reconstitute in mobile phase before analysis.	For MALDI analysis: Aspirate at least enough 5% ammonium hydroxide in 30% methanol, with or without matrix, to completely immerse tip bed (~ 5 µL) or up to 100 µL. Elute directly onto the MALDI-TOF target if desired. For LC/MS analysis: Elute with 5 to 100 µL 5% ammonium hydroxide in 30% methanol. Dilute with acid or dry down and reconstitute in mobile phase before analysis.

The purification strategy of Bond Elut OMIX

Pretreat sample

Basic residues on the peptide or protein could form a positive charge in a low pH or neutral environment. A negative counter ion with a hydrocarbon chain will pair with this positive basic group and give the peptide a greater affinity for the hydrophobic Bond Elut OMIX sorbent. The counter ion of an ion-pairing agent such as heptafluorobutyric acid (HFBA) is recommended because it contains small hydrocarbon chain counter ions needed to increase hydrophobicity.

Hints and tips

Use HFBA for C18 tips to achieve the best results over a wide range of peptides. For greater selectivity, choosing a more hydrophilic counter ion (formic acid or TFA) would help retain only the more hydrophobic compounds. The recommended 0.1 to 0.5% HFBA concentration is a general range for most analyses. Free carboxyl groups on the peptides could display a negative charge above pH 4, resulting in poor retention on the Bond Elut OMIX sorbent. Thus, the target pH for a sample is less than pH 4.

Conditioning and equilibration

The conditioning steps prepare the OMIX sorbent for optimum binding with the peptides.

The acetonitrile in the wetting solution modifies sorbent solvation to enhance interaction between the OMIX material and peptides for better retention. Once the membrane has been wetted with an organic solution, ensure proper flow and peptide recovery by avoiding drawing air into the tip and thus drying the sorbent.

The subsequent HFBA or TFA flush removes the residual organic solvent from the tip for proper retention of the sample upon loading. In addition, washing the hydrophobic sorbent with an ion-pairing solution will reduce any unwanted silanol interactions during the purification and increase final recoveries of the target peptides.

Hints and tips

Don't introduce air through the sorbent during any part of the procedure after the conditioning step, to ensure optimum flow and peptide recovery.

Hints and tips

Always set the pipettor to 10 µL or 100 µL and secure the pipette tip tightly to the end of the pipettor for optimum aspiration and tip-to-pipettor seal.

Hints and tips

Bond Elut OMIX tip should not be used for quantitative volume measurement to avoid inaccurate volumetric dispensing.

Hints and tips

When transitioning between reagents, keep the plunger of the pipettor depressed to the first stop until the tip is submerged into the next solution.

Bind sample

The sample is applied to the Bond Elut OMIX sorbent, which selectively binds the peptides of interest while removing any unwanted salts and contaminants.

Hints and tips

For low concentration samples, multiple cycles (10 to 15) can improve recoveries of the low abundance peptides.

Purify/desalt

Weakly bound sample interferences are selectively removed from Bond Elut OMIX.

Hints and tips

Two rinses are sufficient for most applications. However, the Bond Elut OMIX sorbent can be washed many times if additional purification is desired.

Hints and tips

Using the same concentration of rinse solution as in the conditioning steps will reduce the number of reagents that needs to be prepared for the purification.

Elution

The organic component of the elution solvent disrupts the binding of the target peptides from the Bond Elut OMIX sorbent while the low concentration of acid masks any potential sites of free silanol activity.

The replacement of TFA with formic acid or acetic acid is recommended for LC/MS or LC/MS/MS analysis to avoid potential ion suppression. You can use acetic acid or formic acid as both work equally well for a wide range of peptides.

If enrichment of the peptide sample is not a concern, a full 10 µL volume or multiple aliquots of the elution solvent may be used to improve peptide recoveries.

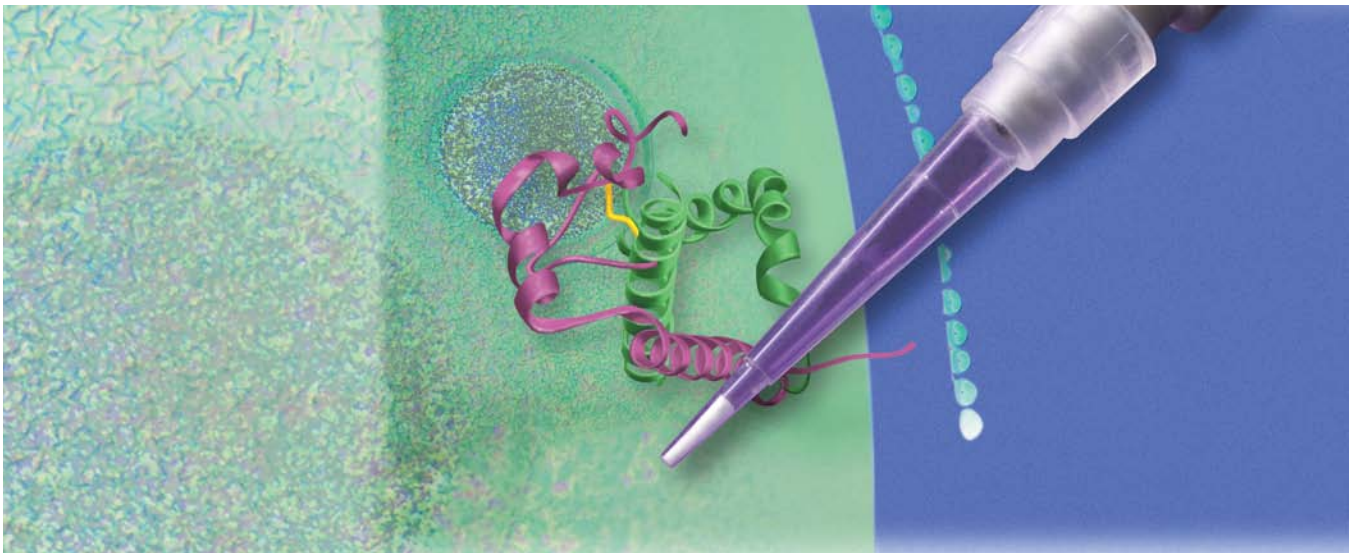
Hints and tips

For optimum peptide recovery and vacuum aspiration, do not reset the pipettor to less than 10 µL. Always pipette the desired amount of elution reagent into a separate vial or well plate and carefully aspirate the entire volume into the tip. Don't let air pass through the sorbent.

For additional recommendations on optimizing recovery of peptides contact your Agilent representative.

Hints and tips

Do not re-aspirate and re-elute the same elution solution. Cycling the sample back and forth across the sorbent during the elution step can cause evaporation of the organic constituent and re-binding of some analytes, resulting in lower recoveries of the more hydrophobic peptides.



Frequently asked questions

What is the difference between the Bond Elut OMIX standard and MiniBed versions?

Both the standard and MB Bond Elut OMIX pipette tips use a 10 µL tip housing. The only difference between the two configurations is the quantity of material packed into the tip. The Bond Elut OMIX MB (MiniBed) version contains ~1/3rd the sorbent material of the standard version to achieve the lower elution volumes (0.5 to 2 µL) required for maximum enrichment and improved sensitivity. Bond Elut OMIX standard tips are recommended for applications that require higher capacity and elution volumes in the 2 to 10 µL range. All solvent volumes used in the Bond Elut OMIX procedure, other that the final elution step, are the same for both varieties.

What types of peptides and proteins can be purified with Bond Elut OMIX?

Bond Elut OMIX pipette tips contain functionality on a monolithic silica surface. Any peptide or low molecular weight protein with some hydrophobic nature will have a strong affinity for the sorbent. The monolithic properties of the silica layer in Bond Elut OMIX provide higher binding capacities than other tip materials since maximum exposure to the functionalized surface is achieved with the uniform flow through the tip.

What types of interferences are removed by Bond Elut OMIX?

Bond Elut OMIX pipette tips efficiently remove salts, detergents and hydrophilic contaminants that do not bind to the reversed-phase or ion-exchange media. The majority of these contaminants will be eliminated during the sample application step. Any weakly bound interferences remaining on the Bond Elut OMIX sorbent surface during sample application can be easily removed in the rinse step with HFBA or TFA.

What if there is no flow through the tip?

Agilent tests each lot of Bond Elut OMIX tips to ensure that it meets our stringent flow specifications. Thousands of Bond Elut OMIX tips have been tested with a <0.01% plugging rate. Once the tip has been conditioned, it is critical to keep the membrane wet to ensure proper binding of analytes to the Bond Elut OMIX sorbent. If air is drawn into the tip before the sample application, you may experience slow to no flow that will result in inconsistent and low recoveries of peptides. If the Bond Elut OMIX sorbent is exposed to air before sample application, aspirate and dispense with two additional aliquots of the conditioning solution to re-wet the tip.

How do I ensure optimum aspiration with less than the full 10 µL volume?

Always leave the pipettor set to 10 µL or 100 µL. A full 10 µL or 100 µL volume is recommended for all solutions throughout the Bond Elut OMIX procedure EXCEPT for the final elution volume when lower quantities are required for peptide enrichment. Optimum recoveries during the final step are obtained when the elution reagent is pipetted into a separate vial or well plate. Then, with the pipettor set to 10 µL or 100 µL, carefully pipette the entire volume of elution solvent into the Bond Elut OMIX tip. We do not recommend aspirating and dispensing the sample more than once during the elution step.

Why is heptafluorobutryic acid (HFBA) the preferred acid for the sample pre-treatment and elution solvent with C18

Although TFA is commonly used as an ion-pairing agent in peptide and protein analysis for sample cleanup, as well as HPLC applications, our data suggest HFBA is more effective in peptide enrichment with Bond Elut OMIX C18 and C18MB. In an acidic environment, any basic residue on the peptide will form a positive charge. The negative counter ion in the acid will then pair with the positively charged base. Using a counter ion with a slightly longer organic chain, such as HFBA, thus increases the hydrophobicity of the peptide and increases the affinity of the peptide for the hydrophobic stationary phase. This is particularly important in the enrichment of very short, polar peptides.

Can other acids be used with Bond Elut OMIX tips, instead of HFBA?

We do NOT recommend using HFBA in the elution reagent, as here we want to reduce the overall hydrophobicity of the joint peptide/counter ion. It is important, however, to achieve a low pH, and so we recommend TFA for elution. For analysis by LC/MS or LC/MS/MS, the TFA in the elution solvent only should be replaced with either 0.1% formic acid OR 0.1% acetic acid to avoid ion suppression caused by TFA. Both the formic and the acetic acid can be used with a 50 to 75% acetonitrile solution for optimum recoveries.

Can I improve recovery of hydrophobic peptides?

Insufficient disruption of the binding between the Bond Elut OMIX sorbent and the peptide during the elution step is the primary cause for lower recovery of hydrophobic peptides. Increasing the acetonitrile concentration in the elution solvent to 75 to 90% will improve the release of these hydrophobic peptides. If elution is being performed with 0.5 to 2 µL of elution solvent, do not re-aspirate. This prevents the hydrophobic peptides from re-binding onto the membrane.

Can I improve recovery of hydrophilic peptides?

To ensure best results of samples that contain hydrophilic peptides, or a wide range of peptides, use the more hydrophobic HFBA counter ion in the pre-treatment, equilibration, and rinse steps, when hydrophilic compounds are weakly bound.

Can Bond Elut OMIX tips be reused?

No, we do not recommend reusing Bond Elut OMIX tips. Using a new tip every time eliminates the risk of carryover and sample contamination problems, and ensures maximum recovery of your target peptides.

What pipettors can be used with Bond Elut OMIX?

Bond Elut OMIX tips are based on a standard 10 µL tip format and are compatible with most P10 single channel and multi-channel pipettors. The brands of pipettors with confirmed compatibility with the Bond Elut OMIX tips include Eppendorf Research, Gilson P10, Rainin, Oxford, Finnpipette multichannel, and VWR single and multichannel pipettors.

Can Bond Elut OMIX pipette tips be used with robotic systems?

Yes. Both the Bond Elut OMIX pipette tip and the tray that houses 96 tips have been tested for automation compatibility on several robotic systems. Bond Elut OMIX meets tip rack standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004, as developed by the American National Standards Institute and the Society for Biomolecular Sciences (now Society for Laboratory Automation and Screening). For an up-to-date list of OMIX recommended robotics vendors contact your local Agilent representative.

Hints and tips

Visit our website for the most up-to-date information on the Bond Elut OMIX product. For recommendations on optimizing OMIX pipette tips to meet your laboratory goals or for troubleshooting advice, contact your local representative.

Ordering information

Phase	Tip volume (µL)	Elution volume (µL)	Tips per pack	Part no.
C18	10	2 to 10	96	A5700310
C18	10	2 to 10	6 x 96	A5700310K
C18MB	10	0.5 to 2	96	A57003MB
C18MB	10	0.5 to 2	6 x 96	A57003MBK
C18	100	5 to 100	96	A57003100
C18	100	5 to 100	6 x 96	A57003100K
C4	10	2 to 10	96	A5700910
C4	10	2 to 10	6 x 96	A5700910K
C4MB	10	0.5 to 2	96	A57009MB
C4MB	10	0.5 to 2	6 x 96	A57009MBK
C4	100	5 to 100	96	A57009100
C4	100	5 to 100	6 x 96	A57009100K
SCX	10	2 to 10	96	A5700410
SCXMB	10	0.5 to 2	96	A57004MB
SCX	100	5 to 100	96	A57004100

Bond Elut OMIX applications

William C Hudson and Jennifer M Massi (2011) Detergent removal using Agilent Bond Elut OMIX SCX pipette tips. Agilent Technologies, Inc., 5990-8886EN.

William C Hudson and Jennifer M Massi (2011) Protein desalting and concentration for MS analysis using Agilent Bond Elut OMIX C4 pipette tips. Agilent Technologies, Inc., 5990-8885EN.

From sample preparation to separation performance

Agilent sets the pace in sample preparation, with a comprehensive product line that includes Captiva filtration and protein precipitation and Bond Elut solid phase extraction, among many others. Our innovative products and dedicated customer support ensure you have the right answer for all your sample preparation needs.

Agilent Captiva

Captiva's unique dual-depth filtration media provides complete removal of precipitated proteins and outstanding resistance to sample clogging, with no loss of analytes. All Captiva components are ultra-clean, and rigorously tested to ensure against non-specific binding. With Captiva, your plasma samples are processed quickly and reliably. Captiva is easily automated for enhanced productivity and excellent for sample storage. This user-friendly filtration device is simple and streamlined with an easy-to-follow 3-step process. And because Captiva samples are pellet-free, you can sample directly from the collection plate.

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- Captiva 96-well filter plates for preparing precipitated proteins for LC/MS
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