



OPTIMIZED ANALYTICAL SOLUTIONS FOR FORENSIC TOXICOLOGISTS



SELECTRA® HPLC COLUMNS



ENVIRO



FORENSICS



PHARMA

SELECTRA® HPLC COLUMNS

SOLID PHASE EXTRACTION OF BENZODIAZEPINES IN BLOOD AND URINE BY LC/MS/MS CONFIRMATIONS USING: 200 mg ZSDAU020 EXTRACTION COLUMN

1. Prepare Sample:

To 1 mL of 100 mM phosphate buffer (pH=6) add internal standard. Add 1 mL of whole blood or serum and 2 mL additional phosphate buffer. Mix/ vortex. Sample pH should be 6.0 ± 0.5 . (Adjust pH accordingly with 100mM monobasic or dibasic sodium phosphate.) Centrifuge as appropriate.

Procedure for Urine:

To 1 mL acetate buffer (pH=5.0) containing 5,000 units/mL β -glucuronidase. To this add 1 mL urine and internal standards. Mix and heat for 3 hours at 65°C. Add 3 mL of 100 mM phosphate buffer (pH=6.0). Mix and centrifuge for 10 minutes at 2000 rpm. Decant liquid onto column after conditioning.

2. Condition Column:

1 x 3 mL MeOH
1 x 3 mL DI H₂O
1 x 1 mL 100 mM phosphate buffer (pH=6)

Note: aspirate at < 3 inches Hg to prevent sorbent drying out

3. Apply Sample:

Load sample at 1-2 mL / minute

4. Wash Column:

1 x 3 mL DI H₂O
1 x 3 mL 100 mM acetic acid
1 x 3 mL CH₃OH
Dry column (5 minutes at > 10 inches Hg)

5. Elute Benzodiazepines:

1 x 3 mL ethyl acetate: acetonitrile: ammonia (78: 20: 2 v/v)
OR
1 x 3 mL Dichloromethane: Isopropanol: ammonia (78: 20: 2 v/v)
Collect eluate at 1-2 mL /minute

6. Evaporation:

Evaporate eluates under a gentle stream of nitrogen < 40°

7. Reconstitute sample in 50 μ L of methanol

Inject 5 μ L



Instrument Conditions:

HPLC Column: 50 x 2.1 mm (3 μ m) Selectra® Phenyl UCT, LLC Part #: SLPHY50ID21
Guard Column: 10 x 2.0 mm (5 μ m) UCT, LLC Part #: SLPHYGDC

Mobile phase:	Time	Acetonitrile	0.1% Formic Acid aqueous
	0	33	67
	5	33	67

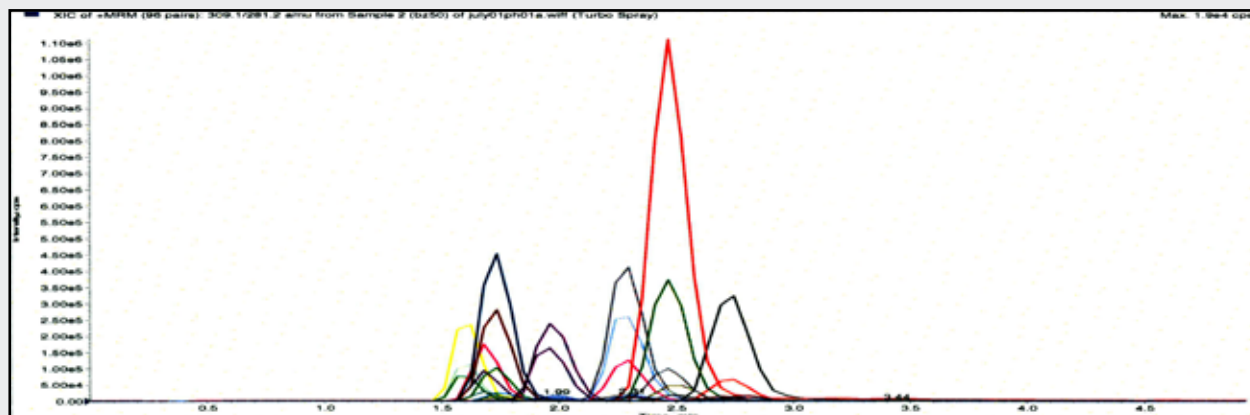
Flow rate: 0.35 mL/ minute

Column Temperature: ambient

Detector: API 2000 MS/MS

Compound	RRT(min.)	MRM Transition	Cerilliant Part #
Alprazolam	2.3	309.1/205.1	A-903
*Alprazolam-D ₅		314.1/286.1	A-910
α -oh-alprazolam	1.6	325.1/297.0	A-907
* α -oh-alprazolam-D ₅		329.0/302	A-910
Chlordiazepoxide	1.1	300.1/227.1	C-022
Diazepam	2.8	285.1/193.0	D-907
*Diazepam-D ₅		290.2/198.2	D-902
Lorazepam	1.9	321.1/275.1	L-901
*Lorazepam-D ₄		325.1/270.0	L-902
Nordiazepam	1.7	271.1/140.1	N-905
*Nordiazepam-D ₅		275.6/140.1	N-903
Oxazepam	1.7	287.1/241.1	O-902
*Oxazepam-D ₅		292.2/198.2	O-901
Temazepam	2.5	301.1/255.1	T-907
*Temazepam-D ₅		306.2/260.1	T-902

Benzodiazepines in Blood Chromatogram



**SOLID PHASE EXTRACTION OF ANTIDEPRESSANTS/
SSRI'S IN BLOOD AND URINE BY LC/MS/MS
CONFIRMATIONS USING:
200 mg ZSDAU020 EXTRACTION COLUMN**

1. Prepare Sample:

To 1 mL of 100 mM phosphate buffer (pH=6) add internal standard.
Add 1 mL of blood or urine. Add 2 mL of 100 phosphate buffer (pH=6).
Mix/vortex.
Sample pH should be 6.0 ± 0.5.
Adjust pH accordingly with 100 mM monobasic or dibasic sodium phosphate.
Mix/vortex.
Centrifuge as appropriate.

2. Condition Column:

1 x 3 mL MeOH
1 x 3 mL DI H₂O
1 x 1 mL 100 mM phosphate buffer (pH=6)

Note: aspirate at < 3 inches Hg to prevent sorbent drying out

3. Apply Sample:

Load sample at 1-2 mL / minute

4. Wash Column:

1 x 3 mL DI H₂O
1 x 3 mL 1% acetic acid
1 x 3 mL CH₃OH
Dry column (5 minutes at > 10 inches Hg)

5. Elute Antidepressants/ SSRI'S:

1 x 3 mL ethyl acetate: acetonitrile: ammonia (78: 20: 2 v/v)
Collect eluate at 1-2 mL /minute

6. Evaporation:

Evaporate eluate under a gentle stream of nitrogen < 40°C

7. Reconstitute sample in 100 µL of methanol

Inject 5 µL



Instrument Conditions:

HPLC Column: 50 x 2.1 mm (3 µm) Selectra® Phenyl UCT, LLC Part #: SLPHY50ID21
Guard Column: 10 x 2.0 mm (5 µm) UCT, LLC Part #: SLPHYGDC

Mobile phase:	Time	%Acetonitrile	0.1% Formic Acid
	0	10	90
	5	50	50
	16	10	90
	20	10	90

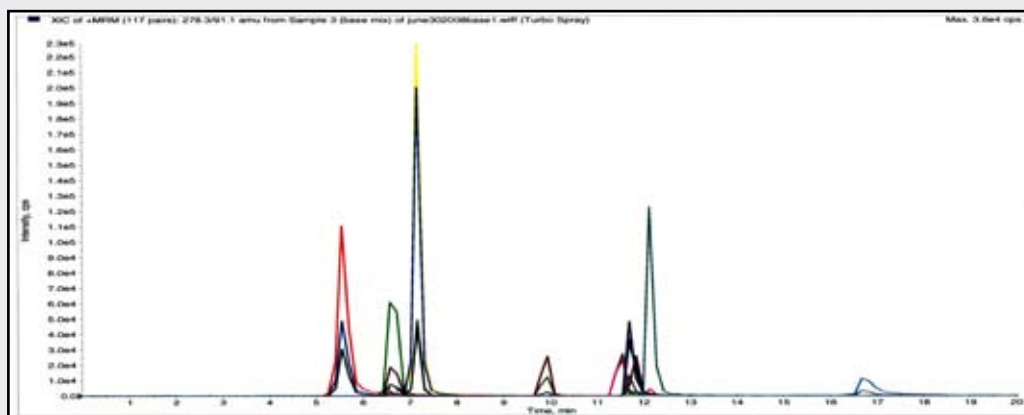
Flow rate: 0.35 mL/ minute

Column Temperature: ambient

Detector: API 2000 MS/MS

Compound	RRT(min.)	MRM Transition	Cerilliant Part #
Amitriptyline	11.7	278.2/233.1	A-923
Bupropion	5.6	240.1/184.1	B-034
Citalopram	10.0	325.2/109.0	C-057
Fluoxetine	12.1	310.1/44.0	F-918
Norfluoxetine	11.8	296.2/134.2	N-923
Nortriptyline	11.4	264.2/233.1	N-907
Venlafaxine	11.7	278.2/58.0	V-004
Zolpidem	7.1	308.2/235.0	Z-901

**Antidepressants/ SSRI'S in Blood and Urine
Chromatogram**





PRICES AND TERMS

Our prices are subject to change without notice. The price in effect when we receive your order will apply. All prices are in US Dollars and are F.O.B. Lewistown, PA 17044. Terms of payment are net 30 days.

MINIMUM ORDERS

We welcome all orders, therefore, we do not have a minimum order requirement. When ordering, please include your purchase order number, complete "Ship To" and "Bill To" address, catalog number, quantity, and description of product(s). Also include your name and a phone number where you can be reached should we have any questions concerning your order.

SHIPMENTS

Normal processing is within 24 hours after receipt of an order. Unless special shipping requests have been made, our trained staff will send all orders by UPS Ground service. The appropriate shipping charges (freight & insurance costs) will be added to the invoice, unless otherwise instructed by the customer.

SPECIAL PRICING

We offer special pricing for volume purchases and standing orders. These discounts apply to bonded phase extraction column purchases only. Please call a sales representative for more information on special pricing qualifications.

RETURN POLICY

Our Quality Manager will handle all returns. Before returning merchandise, please call to obtain a return authorization number from the quality manager. We will need to know the reason for the return, date of purchase, purchase order number and invoice number in order to issue a return authorization number. Return merchandise must be received before a credit can be issued. Returns will not be accepted after 90 days. A restocking fee of 25% of the price paid, or a minimum of \$25.00 (whichever is greater) will be charged on all returns.

WARRANTY

All products manufactured by UCT are guaranteed against defects in materials and workmanship for a period of 90 days after shipment. UCT will replace any items that prove to be defective during this time period.

The exclusive remedy requires the end user to first advise UCT of the defective product by phone or in writing. Secondly, the defective product must be returned within 30 days after proper approval from our Quality Manager. All returns must indicate the purchase order number, the lot number and the shipping date. UCT's total liability is limited to the replacement cost of UCT products.

This warranty does not apply to damage resulting from misuse.

Placing An Order	Mail	Technical Support
Phone: 717.247.0896 800.541.0559 Fax: 717.247.0109	UCT, LLC 2731 Bartram Rd. Bristol, PA 19007	Phone: 215.781.9255 800.385.3153 Fax: 215.785.1226 Email: info@unitedchem.com Forum: forums.unitedchem.com Web: www.unitedchem.com

