

Barbiturates in urine using Strata-X-Drug N and Kinetex C18 2.6µm 100x2.1mm

Column: Kinetex® 2.6 µm C18 100 Å, LC Column 100 x 2.1 mm, Ea

Dimensions: 100 x 2.1 mm ID

Order No: 00D-4462-AN

Elution Type: Gradient

Eluent A: 5mM Ammonium acetate

Eluent B: Acetonitrile

Gradient Profile:	Step No.	Time (min)	Pct A	Pct B
	2	0	90	10
	3	10	55	45
	4	10.01	10	90
	5	12	10	90
	6	12.01	90	10
	7	16	90	10

Flow Rate: 400 µL/min

Col. Temp.: ambient

Detection: Mass Spectrometer (MS) @ amu (ambient)

Detector Info: <a target="_blank"

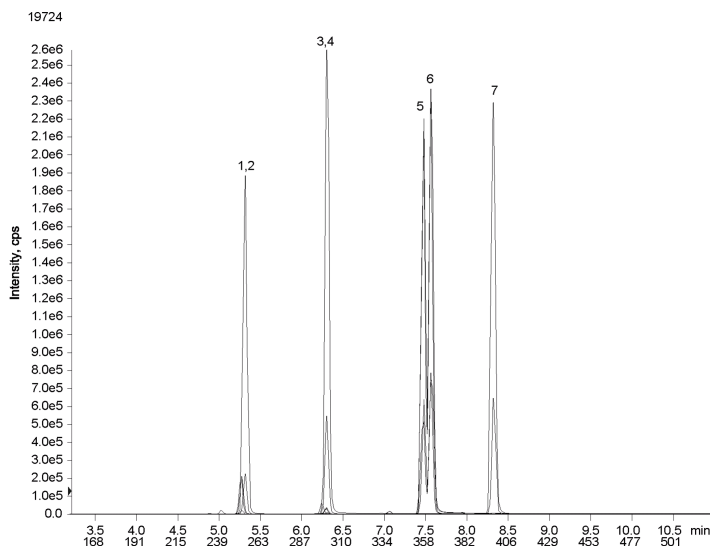
Analyst Note: href="https://sciex.com/products/mass-spectrometers?utm_campaign=2019%20application%20search&utm_source=phenomenex&utm_medium=referral">SCIEX< SecurityGuard™ ULTRA Guard Cartridge System extends column lifetime.

- SecurityGuard ULTRA Cartridges, UHPLC C18 for 2.1mm ID Columns, 3/Pk Part No.: AJ0-8782

- Holder Part No.: AJ0-9000



Products used in this application:



ANALYTES:

- 1 Phenobarbital-d5 (235.9/41.8)
Retention Time: 7.25 min
- 2 Phenobarbital (231.1/85.0, 231.1/42.1)
Retention Time: 7.25 min
- 3 Butalbital-d5 (228.0/41.6)
Retention Time: 9.25 min
- 4 Butalbital (223.1/180.0, 223.1/42.1)
Retention Time: 9.25 min
- 5 Pentobarbital (225.4/182.2, 225.4/42.1)
Retention Time: 11.75 min
- 6 Amobarbital (225.0/182.1, 225.0/42.1)
Retention Time: 12 min
- 7 Secobarbital (237.0/194.2, 237.0/42.1)
Retention Time: 13.65 min

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Sample Preparation Details

for UHPLC Application ID No.: 19724

Barbiturates in urine using Strata-X-Drug N and Kinetex C18 2.6µm 100x2.1mm

PRODUCT DESCRIPTION:

Strata™-X-Drug N 100 µm Polymeric Reversed Phase, 100 mg / 6 mL, Tubes , 30/Pk

Order No.: 8B-S129-ECH

SOLID PHASE EXTRACTION (SPE) PROCEDURE:

Note: The solvent volumes shown below are for a 100 mg bed mass.

The solvent volumes will need to be adjusted for a smaller or larger bed mass.

Condition:

Load:

Pre-Treatment: To 2mL of urine, add 2mLs of 100mM sodium acetate buffer (pH 5.0). pH should be ~4.0-6.0. Load directly onto sorbent - No Conditioning Required

Wash:

Dry:

10 min under full vacuum

Elute:

Final Prep and Analysis:

Evaporate eluant to dryness under stream of N₂ (50°C). Reconstitute samples with 1mL of 10% acetonitrile

Inject: 10 µL on HPLC Mass Spectrometer (MS) @ amu (ambient)

ANALYTES:	Spiked Conc. (ng/mL)	Log P	pKa	% Rec	%RSC (n=0)
1 Phenobarbital-d5	300			100	0.01
2 Phenobarbital	300			99.64	0.48
3 Butalbital-d5	300			100	0.01
4 Butalbital	300			95.71	4.08
5 Pentobarbital	300			96.81	4.58
6 Amobarbital	300			96.38	4.34
7 Secobarbital	300			95.56	6.31

Note: This method is designed as a convenient starting point for further investigation and can be tailored to meet your extraction goals. Call your local Phenomenex Representative for assistance in method development and optimization techniques.

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