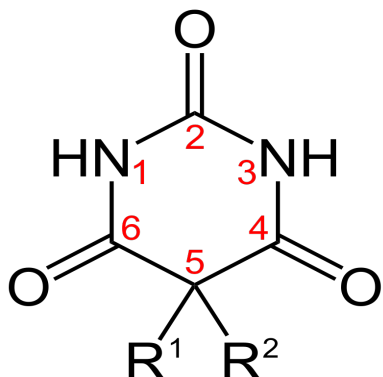


Barbiturates In Urine For GC Or GC/MS Confirmations Using: 200 mg Clean Screen® Extraction Column



UCT Part Numbers

ZSDAU020
Clean Screen® DAU
10 mL, 200 mg sorbent
Without Tips

Or

ZCDAU020
Clean Screen® DAU
10 mL, 200 mg sorbent
With CLEAN-THRU® Tips

Procedure:

1. Prepare Sample

- To 2 mL of urine add internal standard(s)* and 1 mL of 100 mM phosphate buffer (pH 5.0).
- Mix/vortex.
- Sample pH should be 5.0 ± 0.5 .
- Adjust pH accordingly with 100 mM monobasic or dibasic sodium phosphate.

2. Condition Clean Screen® Extraction Column

- 1 x 3 mL CH_3OH .
 - 1 x 3 mL D.I. H_2O .
 - 1 x 1 mL 100 mM phosphate buffer (pH= 5.0).
- Note:** Aspirate at < 3 inches Hg to prevent sorbent drying.

3. Apply Sample

- Load at 1 to 2 mL/minute.

4. Wash Column

- 1 x 3 mL D.I. H_2O .
- 1 x 1 mL 100 mM acetic acid.
- Dry column (5 minutes at > 10 inches Hg).
- 1 x 2 mL hexane.

5. Elute Barbiturates

- 1 x 3 mL hexane/ethyl acetate (50:50); Collect eluate at 1 to 2 mL / minute.

6. Dry Eluate

- Evaporate to dryness at $< 40^\circ\text{C}$.
 - Reconstitute with 100 μL ethyl acetate.
- OPTIONAL DERIVATIZATION
- Add 25-50 μL of 0.2 M TPAH****, Reaction occurs in injection port

7. Quantitate

- Inject 1 to 2 μL onto gas chromatograph.
- For MSD monitor the following ions:



Underivatized				
Compound	Primary Ion**	Secondary	Tertiary	Cerilliant #
Amobarbital	156	141	157	A-020
Butabarbital	156	141	157	B-006
Butalbital	168	167	181	B-024
Hexobarbital*	221	157	236	H-013
Pentobarbital	156	141	197	P-010
Phenobarbital	204	232	117	P-008
Secobarbital	168	167	195	S-002
Thiopental	172	157	173	

Derivatized				
Compound	Primary Ion**	Secondary	Tertiary	Cerilliant #
Butalbital-D5	201	214		B-005
Butalbital	196	195	209	B-024
Amobarbital	169	184	185	A-020
Pentobarbital	169	184	112	P-010
¹³ C ₄ -Secobarbital	200	185		
Secobarbital	196	195	181	S-002
Phenobarbital-D5l	237	151		P-017/P-018
Phenobarbital	232	146	175	P-008

**Target ions in bold

* Suggested internal standard for GC/MS: Hexobarbital or a Deuterated Barbiturate analog.

** Quantitation Ion

**** Part # STMPAH-0-1 1, 10, 25, 100

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