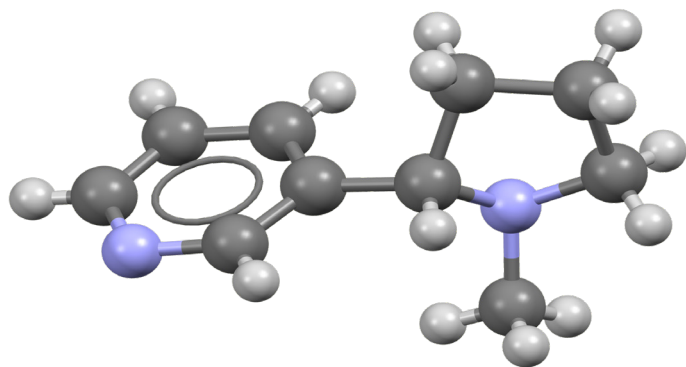


Nicotine and Cotinine In Urine Or Serum For GC Or GC/MS Confirmations Using: 200 mg Clean Screen® Extraction Column



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 100 mM phosphate buffer (pH =6.0) add internal standards*. Add 2 mL of urine or serum
- 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 Clean Screen® Extraction Column

- 1 x 3 mL CH₃OH
 - 1 x 3 mL D.I. H₂O.
 - 1 x 1 mL 100 mM phosphate buffer (pH 6.0)
- Note:** Aspirate at < 3 inches Hg to prevent sorbent drying.

3. Apply Sample

- Load at 1 mL/minute

4. Wash Column

- 1 x 3 mL DI H₂O
- 1 x 2 mL 200 mM HCl
- Dry column (5 minutes at > 10 inches Hg)
- 1 x 2 mL Hexane

5. Wash Column

- Remove rack of collection tubes to rewash columns
- 1 x 3 mL CH₃OH
- Dry column, (5 minutes at > 10 inches Hg)

6. Elute Cotinine and Nicotine

- Replace rack of collection tubes
 - 1 x 3 mL CH₂Cl₂/IPA/NH₄OH (78:20:2); Collect eluate at 1 mL/minute
- Note:** Prepare elution solvent daily. Add IPA/NH₄OH, mix, then add CH₂Cl₂ (pH 11-12)

7. Concentrate

- Evaporate to dryness at < 40 °C
- Take care not to over-heat or over evaporate
- Reconstitute with 100 µL ethyl acetate

8. Quantitate

- Inject 1 to 2 µL onto chromatograph
- Monitor the following ions (GC/MS):

Analyte	Primary Ion**	Secondary	Tertiary	Cerilliant #
Nicotine	84	133	162	N-008
*Nicotine-D4	88	137	166	N-048
Cotinine	98	119	176	C-016
*Cotinine-D3	101	122	179	C-017

** Quantitation Ion

SOURCE - UCT Internal Publication



UCT, LLC • 2731 Bartram Road • Bristol, PA 19007 800.385.3153 • 215.781.9255

www.unitedchem.com Email: methods@unitedchem.com

©UCT, LLC 2008 • All rights reserved

