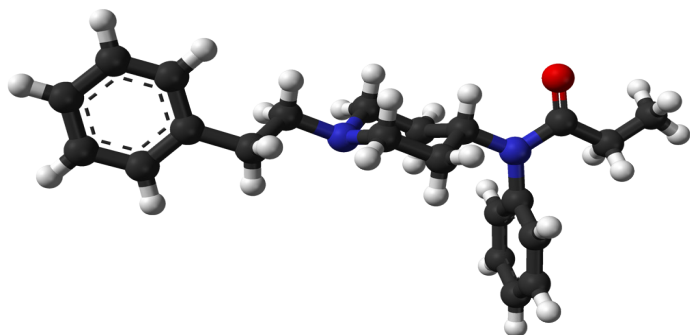


Fentanyl and Analogues In Blood, Plasma/Serum, Urine and Tissue For GC Or GC/MS Confirmations Using: 200 mg Clean Screen® Extraction Column



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 1 mL of 100 mM phosphate buffer (pH = 6) add internal standards*. Add 1- 5 mL of blood , plasmas/ serum, urine or 1 g (1: 4) tissue homogenate. Mix/vortex.
- Add 2 mL of 100 mM phosphate buffer (pH 6.0).
- Mix/vortex.
- Sample pH should be 6.0 ± 0.5 .
- Adjust pH accordingly with 100 mM monobasic or dibasic sodium phosphate.
- 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).

Note: Aspirate at < 3 inches Hg to prevent sorbent drying.

3. Apply Sample

- Load sample at 1 mL/minute.

4. Wash Column

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

5. Elute Fentanyls

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

6. Concentrate

- Evaporate to dryness at < 40°C.
- Reconstitute with 50 µL ethyl acetate.

7. Quantitate

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



Analyte	Primary Ion****	Secondary	Tertiary	Cerilliant #
Fentanyl	245	146	189	F-002
Fentanyl-D5I*	250	151	194	F-001
α -Methylfentanyl	259	203	146	
Para-Fluorofentanyl	263	164	207	
3-Methylfentanyl	259	160	203	
Thienfentanyl	245	146	189	
Sufentanil	289	140		
Carfentanil	303	187		
Lofentanil	317	201	289	
Alfentanil	289	268	194	

* Suggested internal standard for GC/MS: D₅-Fentanyl

**** Quantitation ion

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