



**OPIATES IN URINE FOR GC/MS CONFIRMATIONS USING:
30 mg STYRE SCREEN® DBX EXTRACTION COLUMN**
Part #: SSDBX033 without Tips or SCDBX033 with CLEAN-THRU® Tips

1. SAMPLE PREPERATION (ENZYMATIC HYDROLYSIS)

To 1 mL of urine add internal standard(s) and 1.0 mL β -Glucuronidase solution. (β -Glucuronidase solution contains 5000 Funits/mL *Patella Vulgata* in 100mM acetate buffer, pH 5.0). Hydrolyze for 3 hours at 60°C. Cool, then centrifuge for 10 minutes at high speed and discard pellet. Adjust pH to 6.0 \pm 0.5 with 1.0N NaOH.

NOTE: For unconjugated (free) opiates; to 1 mL urine, add internal standard(s) and 1 mL 100mM phosphate buffer (pH 6.0). Proceed to Step #2.

2. APPLY SAMPLE TO DBX COLUMN

Load at a rate of 1 to 2 mL/min.

3. WASH COLUMN

1 x 1 mL DI H₂O.
1 x 1 mL 100mM acetate buffer (pH 4.5).
1 x 1 mL MeOH.
Dry column (3 mins at > 10 inches Hg).

4. ELUTE OPIATES

2 x 0.5 mL CH₂Cl₂/IPA/NH₄OH (78/20/2), collect eluate at 1 to 2 mL/min.
Evaporate eluate to dryness at < 40°C.

5. DERIVATIZATION

Add 50 μ L ethyl acetate and 50 μ L BSTFA (1% TMCS), then cap, mix/vortex.
React for 20 mins at 70°C, allow to cool.

NOTE: Do not evaporate BSTFA solution.

6. ANALYZE

Inject 1 to 2 μ L onto gas chromatograph: For MSD monitor the following ions:

Analyte (TMS)	Target (Quantitation) Ion	Qualifier Ions	Cerilliant #
Codeine-TMS	371	234, 343	C-006
*Codeine-D6-TMS	377	237, 349	C-040
Morphine-TMS	429	401, 414	M-005
*Morphine-D6-TMS	435	404, 420	M-085
6-Acetylmorphine-TMS	399	400, 340	A-009
6-Acetylmorphine-D6-TMS	405	406, 343	A-026

*Suggested internal standards