



**COCAINE AND ITS METABOLITES FROM  
MECONIUM FOR GC OR GC/MS ANALYSIS USING: 200 mg  
CLEAN SCREEN<sup>®</sup> EXTRACTION COLUMN**  
Part #: ZSDAU020 without Tips or ZCDAU020 with CLEAN-THRU<sup>®</sup> Tips

**1. PREPARE SAMPLE**

Vortex 0.5 -1 g meconium with 2 mL of CH<sub>3</sub>OH.  
Centrifuge and transfer the supernatant to a clean tube.  
To each tube add 3 mL 100 mM phosphate buffer (pH 6.0), internal standard and vortex.  
Matrix must be more aqueous than organic for good extraction to occur.

**2. CONDITION CLEAN SCREEN<sup>®</sup> EXTRACTION COLUMN**

1 x 3 mL CH<sub>3</sub>OH.  
1 x 3 mL D.I. H<sub>2</sub>O.  
1 x 3 mL 100 mM phosphate buffer (pH= 6.0).  
**NOTE:** Aspirate at < 3 inches Hg to prevent sorbent drying.

**3. APPLY SAMPLE**

Load at 1 to 2 mL/minute. Allow to dry.

**4. WASH COLUMN**

1 x 3 mL D.I. H<sub>2</sub>O.  
1 x 1 mL 100 mM HCl.  
1 x 3 mL CH<sub>3</sub>OH.  
Dry column (5 minutes at > 10 inches Hg).

**5. ELUTE COCAINE AND METABOLITES**

1 x 3 mL CH<sub>2</sub>Cl<sub>2</sub>/IPA/NH<sub>4</sub>OH (78:20:2); Collect eluate at  
1 to 2 mL/minute.  
**NOTE:** Prepare elution solvent daily. Add IPA/NH<sub>4</sub>OH, mix, then add CH<sub>2</sub>Cl<sub>2</sub> (pH 11-12).

**6. EVAPORATE**

Evaporate the elution solvent to dryness without heating.

**7. DERIVATIZE**

Add 50 µL ethyl acetate and 50 µL BSTFA (with 1%TMCS)\*\*\*.  
Overlay with N<sub>2</sub> and cap. Mix/vortex.  
React 20 minutes at 70°C. Remove from heat source to cool.  
**NOTE:** Do not evaporate BSTFA solution.

**8. QUANTITATE**

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

<u>Compound</u>	<u>Primary Ion****</u>	<u>Secondary</u>	<u>Tertiary</u>	<u>Cerilliant #</u>
Cocaine-D3*	185	201	306	C-004
Cocaine	182	198	303	C-008
Benzoylecgonine-D3-TMS*	243	259	364	B-008
Benzoylecgonine-TMS	240	256	361	B-007

\* Suggested internal standards for GC/MS

\*\*\* Part # SBSTFA-1-1, 10, 25, 100

\*\*\*\* Quantitation ion