



**AMPHETAMINES, OPIATES, & PHENCYCLIDINE IN  
ORAL FLUID FOR GC/MS ANALYSIS USING:  
50 mg CLEAN SCREEN<sup>®</sup> DAU EXTRACTION COLUMN**  
Part #: ZSDAU005

**1. PREPARE SAMPLE**

Add 100 - 500  $\mu\text{L}$  of neat oral fluid sample to a clean tube.  
Add internal standard(s) and let sit for 10 minutes at room temperature.  
Add 800  $\mu\text{L}$  of 100 mM phosphate buffer (pH= 6.0).  
Mix/vortex for 10 seconds. Sample pH should be  $6.0 \pm 0.5$ .  
Adjust pH accordingly with 100 mM monobasic or dibasic sodium phosphate.

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

1 x 200  $\mu\text{L}$   $\text{CH}_3\text{OH}$ .  
1 x 200  $\mu\text{L}$  D.I.  $\text{H}_2\text{O}$ .  
1 x 200  $\mu\text{L}$  100 mM phosphate buffer (pH=6.0).

**3. APPLY SAMPLE**

Do not exceed 1 mL/minute.

**4. WASH COLUMN**

1 x 500  $\mu\text{L}$  D.I.  $\text{H}_2\text{O}$ .  
1 x 500  $\mu\text{L}$  100 mM acetic acid.  
1 x 500  $\mu\text{L}$   $\text{CH}_3\text{OH}$ .  
Dry column (5 minutes at > 10 inches Hg).

**5. ELUTION**

1 x 800  $\mu\text{L}$   $\text{CH}_2\text{Cl}_2/\text{IPA}/\text{NH}_4\text{OH}$  (70:26:4).  
Do not exceed 1 mL/minute.  
NOTE: Prepare elution solvent daily.  
Add IPA/ $\text{NH}_4\text{OH}$ , mix, then add  $\text{CH}_2\text{Cl}_2$  (pH 11-12).

**6. DRY ELUATE**

For amphetamines and PCP, add 100  $\mu\text{L}$  of 5% trifluoroacetic acid in methanol after 5 min. drying.  
(5 min drying removes ammonia, addition of acid ionizes volatile analytes preventing loss)  
Evaporate to full dryness at < 40°C under a stream of  $\text{N}_2$ .

**7. DERIVATIZE**

**For Amphetamines\*:** Add 50  $\mu\text{L}$  PFPA (PFAA).  
Vortex. Overlay with  $\text{N}_2$  and cap.  
React 20 minutes at 70°C.  
Evaporate to dryness at < 40°C.  
Reconstitute with 50  $\mu\text{L}$  ethyl acetate.

**For Opiates\*:** Add 200  $\mu\text{L}$  of a 1:1 solution of propionic anhydride/pyridine.  
Make fresh daily.  
Vortex.  
React 60 minutes at 40°C.  
Evaporate to dryness at < 40°C.  
Reconstitute with 50  $\mu\text{L}$  ethyl acetate.

**8. QUANTITATE**

Inject 2  $\mu\text{L}$  onto gas chromatograph.

\*Alternate derivatizations may be used.  
Phencyclidine does not derivatize.