

# Synthetic Cannabinoids "Spice" Drugs Confirmations LC-MS/MS and GC-MS using Clean Screen® THC SPE Column



## UCT Part Numbers

**CSTHC206**  
Clean Screen THC Extraction  
Column 200 mg 6 mL

## Procedure:

### 1. Prepare Sample

- To 1 mL of 100 mM phosphate buffer (pH= 6) add internal standard. Add 1-2 mL of urine.
- Add 3 mL of 100 phosphate buffer (pH= 6). Mix/vortex.
- Sample pH should be  $6.0 \pm 0.5$ .
- 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  $\text{CH}_3\text{OH}$ .
  - 1 x 3 mL D.I.  $\text{H}_2\text{O}$ .
  - 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 to 2 mL/minute.

### 4. Wash Column

- 1 x 3 mL DI  $\text{H}_2\text{O}$ .
- 1 x 3 mL of 100 mM phosphate buffer containing 20% acetonitrile.
- Dry column (5 minutes at > 10 inches Hg)

### 5. Elute Spice

- 2 x 3 mL ethyl acetate contain 10 %  $\text{CH}_3\text{OH}$ .
- Collect eluate at 1-2 mL / minute.

### 6. Evaporation

- Evaporate eluate under a gentle stream of nitrogen < 40°C.

### 7. Reconstitute

- Sample in 50  $\mu\text{L}$  of mobile phase for LC-MS/MS Inject 10  $\mu\text{L}$ .
- Dissolve residue in 50  $\mu\text{L}$  of ethyl acetate and MSTFA for GC-MS
- Heat at 70 °C for 2 hours
- Cool and inject 1  $\mu\text{L}$  onto GC-MS



**Instrument Conditions (LC-MS/MS)**

Column	50 x 2.1 mm (5,µm) Biphenyl (Restek)
Flowrate	0.6 mL/minute
Column Temperature	40°C
Detector	API 4000 Qtrap MS/MS

**Mobile Phase**

Time (min)	% Acetonitrile (containing 0.1% formic acid/2 mM ammonium formate)
0	30
8	40
15	40
16	90
20	30

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