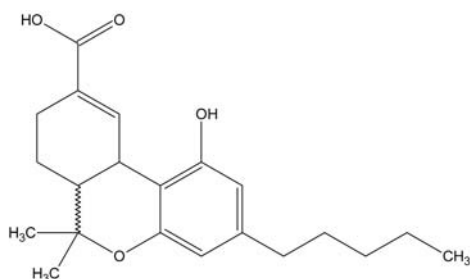




## SPE Application Note for THC-COOH from Urine (THC Column)

This method was developed for the extraction of the THC-COOH metabolite for drugs of abuse applications. The analyte is extracted by a non-polar retention mechanism.

Structure:



Structural considerations:	Due to the presence of a carboxylic acid group, this compound will require hydrolysis prior to the analytical determination.
Matrix considerations:	The analyte is being extracted from an aqueous matrix of high ionic strength.
Analytical Method:	GC-MS
Reagents:	<ol style="list-style-type: none"> <li>0.01 M HCl. Add 2 mL of concentrated HCL to 200 mL of deionized water in a 250 mL volumetric flask. Dilute to mark with deionized water.</li> <li>Acetonitrile/acetone/0.01 M HCl 15:15:70 (v/v). Add 15 mL of ethyl acetate and 15 mL of acetone to a 100 mL volumetric flask. Dilute to mark with 0.01 M HCl.</li> <li>Hexane/ethyl acetate/acetone 50:40:10 (v/v). Add 40 mL of ethyl acetate and 10 mL of acetone to a 100 mL volumetric flask. Dilute to mark with hexane.</li> </ol>

### Extraction Procedure

ISOLUTE® SPE Column:	THC Column: 100 mg/3 mL (Part Number 292-0010-B)
Pre-treatment:	Add 100 µL of internal standard to 3 mL of urine. Hydrolyze with 0.1 mL of NaOH, 10 M. Heat for 15 minutes at 60 °C. Cool. Add 0.5 mL of glacial acetic acid.
Solvation:	Rinse column with 1 mL of methanol at 2 to 4 mL per/minute.
Equilibration:	Rinse column with 1 mL of water at 2 to 4 mL/min, followed by 1 mL of 0.01 M HCl at 2 to 4 mL/min.
Sample Application:	Apply sample at 1.5 mL/min.
Interference Elution:	Rinse column with 2 mL of acetonitrile/acetone/0.01 M HCl, 15:15:70 (v/v) at 2 to 4 mL/min. Dry for 30 seconds under -20 psig vacuum or under 20 psig nitrogen.
Analyte Elution:	Elute sample with 2 mL hexane/ethyl acetate/acetone 50:40:10 (v/v) at 1 mL/min. Evaporate to dryness. Derivatize with 0.05 mL BSTFA at 60 °C for 15 min. Inject into GC.

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