

Solid Phase Extraction For Clinical & Forensic Analysis



The leader in functionalized silica

DRUG CLASS	HYDROLYSIS	SAMPLE PREPARATION	COLUMN PREPARATION	COLUMN WASH	SAMPLE ELUTION	SAMPLE CONCENTRATION	RECONSTITUTION	SUGGESTED DERIVATIZATION for GC/MS	CHEMICAL STRUCTURE AND NAME	ION Numbers	TIC of Data: Std.D.	Full Scan MS
TRICYCLIC ANTIDEPRESSANTS	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O Acetic Acid Methanol	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Evaporate to dryness	Methanol	Acetylation for Secondary Amines	 3-(10,11-dihydro-5H-dibenz[<i>a,d</i>]cycloheptene-5-ylidene)-N,N-dimethyl-1-propanamine Amitriptyline	Ion 232 Ion 217 Ion 305		
BARBITURATES	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O Acetic Acid Hexane	Hexane / Ethyl Acetate (50:50)	Evaporate to dryness	Ethyl Acetate	Not Required	 5-ethyl-5-(1-methylpropyl)hexahydroimidazo[2,4-b]pyridine-2,4,6-trione Secobarbital	Ion 168 Ion 167 Ion 195		
BENZODIAZEPINES	① Acid Hydrolysis for Benzophenone ② Enzymatic with β-glucuronidase	Adjust pH to 9.0 with borate buffer	Methanol DI H ₂ O borate buffer	10% MEOH in H ₂ O Hexane	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Evaporate to dryness	Ethyl Acetate	BSTFA with 1% TMCS	 8-chloro-1-methyl-6-phenyl-4H(1,2,3-triazolo[4,3-a]1,4-benzodiazepine) Alprazolam	Ion 429 Ion 147 Ion 313		
LSD	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O Acetic Acid Methanol	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Evaporate to dryness	Ethyl Acetate	BSTFA with 1% TMCS	 d-lysergic acid diethylamide LSD	Ion 395 Ion 293 Ion 268		
MEPERIDINE	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O Acetic Acid Methanol	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Evaporate to dryness	Methanol	Not Required	 ethyl-1-methyl-4-phenyl-piperidine-4-carboxylate Meperidine	Ion 71 Ion 172 Ion 247		
Δ9 THC-COOH	① Base Hydrolysis with 10 N KOH ② Enzymatic Hydrolysis with β-glucuronidase	Adjust pH to 3.5 with glacial acetic acid	Methanol DI H ₂ O 0.1 N HCl	DI H ₂ O 40% Acetonitrile in 0.1 N HCl Hexane	Hexane / Ethyl Acetate (50:50)	Evaporate to dryness	Ethyl Acetate	BSTFA with 1% TMCS	 delta9-tetrahydrocannabinol-9-carboxylic acid THCA	Ion 371 Ion 473 Ion 488		
COCAINE AND BENZOYLECGONINE	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O 0.1 N HCl Methanol	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Evaporate to dryness	Ethyl Acetate	BSTFA with 1% TMCS	 3-benzoyloxy-8-methyl-8-azabicyclo[3.2.1]octane-2-carboxylic acid Benzoylecgonine	Ion 240 Ion 256 Ion 361		
CODEINE AND MORPHINE	① Acid Hydrolysis with HCl and heat 121° C ② Enzymatic Hydrolysis with β-glucuronidase	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O Acetate buffer Methanol	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Evaporate to dryness	Ethyl Acetate	BSTFA with 1% TMCS	 7,8-didehydro-4,5-epoxy-3-methoxy-17-methylmorphinan-6-ol Morphine	Ion 429 Ion 287 Ion 324		
AMPHETAMINE AND METHAMPHETAMINE	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O Acetic Acid Methanol	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Evaporate to dryness	Ethyl Acetate	PFPA (PFAA)	 1-phenyl-2-aminopropane Amphetamine	Ion 204 Ion 118 Ion 160		
PHENCYCLIDINE	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	DI H ₂ O Acetic Acid Methanol	Methylene Chloride Isopropanol Ammonium Hydroxide (78:20:2)	Add 30 μL DMF Evaporate to 30 μL	Ethyl Acetate	Not Required	 1-(1-phenylcyclohexyl)piperidine Phencyclidine	Ion 200 Ion 91 Ion 242		
GHB	Not Required	Adjust pH to 6.0 with phosphate buffer	Methanol DI H ₂ O phosphate buffer	NA	Methanol / NH ₄ OH (99:1)	Evaporate to dryness	Ethyl Acetate	BSTFA with 1% TMCS	 gamma-hydroxybutyric acid GHB	Ion 233 Ion 234 Ion 235		
ETHYL GLUCURONIDE	Not Required	Add 50 μL of formic acid to 1 mL urine	1% Formic Acid	DI H ₂ O Acetic Acid Methanol	1% Formic Acid / Methanol	Evaporate to dryness	MeOH	MSTFA with 1% TMCS	 ethyl glucuronide EIG	Ion 160 Ion 261 Ion 405		

