



Cuyahoga County Regional Forensic Science Laboratory

Toxicology Unit



Scope of Analysis

VOLATILES SCREENING AND CONFIRMATION by GC/FID: Ethanol, Methanol, Acetone, Isopropanol. **VOLATILES by GC/MS:** includes (but not limited to) Acetaldehyde, Acetone, Chloroform, Dichloromethane, Ethanol, Ethyl Acetate, Isopropanol, Methanol, Toluene

ACIDIC/NEUTRAL DRUGS by LC-MS/MS: Acetaminophen, Pregabalin, Gabapentin, Levetiracetam, Caffeine, Salicylic Acid, Lamotrigine, Primidone, p-HPPH, Meprobamate, Phenobarbital, Topiramate, Licarbazepine, CBZ-10,11-epoxide, Oxcarbazepine, Butalbital, Metaxalone, Phenytoin, Pentobarbital, Carbamazepine, Carisoprodol, Tiagabine, Naproxen

CARBON MONOXIDE by CO-Oximetry: Carbon Monoxide (Carboxyhemoglobin)

GLYCOLS CONFIRMATION by GC/MS: Ethylene Glycol, Propylene Glycol

GABAPENTIN/PREGABALIN CONFIRMATION by LC-MS/MS: Gabapentin, Pregabalin

ELISA (Enzyme-Linked ImmunoSorbent Assay) SCREEN: Amphetamine (Target = d-Amphetamine); Barbiturates (Target = Pentobarbital); Benzodiazepines (Target = Alprazolam); Cannabinoids (Target = 11-nor-D-9-THC-COOH (marijuana metabolite)); Carisoprodol (Target = Carisoprodol); Cocaine Metabolite (Target = Benzoylcegonine); Fentanyl (Target = Fentanyl); Methamphetamine (Target = d-Methamphetamine); Oxycodone (Target = Oxycodone); Phencyclidine (Target = Phencyclidine); Tricyclic Antidepressants (Target = Nortriptyline); Methadone (Target = Methadone); Opiates (Target = Morphine); Zolpidem (Target = Zolpidem); Buprenorphine (Target = Buprenorphine)

BASIC DRUGS by GC/MS (screening and confirmation): includes common antidepressants, opioids/narcotic analgesics, CNS stimulants, antipsychotics, antiarrhythmics, dissociative anesthetics, antihistamines, hypnotics/sedatives/anxiolytics, muscle relaxants, cathinones, and other agents

PHENCYCLIDINE (PCP) CONFIRMATION by GC/MS: Phencyclidine

CLINICAL CHEMISTRIES: Sodium, Potassium, Chloride, Glucose, Urea (as VUN), Creatinine, Magnesium, Calcium, Lactate

COCAINE AND METABOLITES CONFIRMATION by LC-MS/MS: Benzoylcegonine, Cocaine, Cocaethylene, Anhydroecgonine Methyl Ester, Ecgonine Methyl Ester

CANNABINOID CONFIRMATION by LC-MS/MS: Δ^9 -THC, 11-OH- Δ^9 -THC (marijuana metabolite), 11-nor- Δ^9 -THC-COOH (marijuana metabolite). **CANNABINOID CONFIRMATION by GC/MS:** TOTAL 11-nor- Δ^9 -THC-COOH (marijuana metabolite)

OPIOIDS CONFIRMATION by LC-MS/MS: Morphine, Oxycodone, Oxymorphone, Hydrocodone, Dihydrocodeine, Hydromorphone, Tramadol, O-Desmethyltramadol, Codeine, 6-Acetylcodeine, 6-Acetylmorphine, Ketamine, Norketamine, Buprenorphine, Norbuprenorphine, Mitragnine, Methadone, EDDP, EMDP, Propoxyphene, 6-alpha-Naltrexol, 6-beta-Hydrocodol, 6-beta-Naltrexol, Deschloroketamine, Desomorphine, Ethylmorphine, Meperidine, Normeperidine, Naloxone, Naltrexone, Norcodeine, Norhydrocodone, Noroxycodone, Speciocilaine, Specioygnine, Tapentadol, 6-beta-Hydromorphol, 6-alpha-Oxymorphol, 6-alpha-Oxycodol, 6-beta-Oxycodol, 2F-DCK, U-47700, U-48800

BENZODIAZEPINES CONFIRMATION by LC-MS/MS: (±)-Zopiclone, 2-Hydroxyethylflurazepam, 3-Hydroxyflunitrazepam, 4-Hydroxyalprazolam, 7-Aminoclonazepam, 7-Aminoflunitrazepam, Alprazolam, Bromazolam, Clobazam, Clonazepam, Clonazolam, Delorazepam, Deschloroetizolam, Diazepam, Diclazepam, Estazolam, Etizolam, Flualprazolam, Flubromazepam, Flubromazolam, Flunitrazepam, Flunitrazolam, Flurazepam, Lorazepam, Lormetazepam, Meclonazepam, Methylclonazepam, Midazolam, N-Desalkylflurazepam, N-Desmethylclobazam, N-Desmethylflunitrazepam, Nitrazepam, Nitrazolam, Nordiazepam, Oxazepam, Phenazepam, Temazepam, Triazolam, Zaleplon, Zolpidem, α -Hydroxyalprazolam, α -Hydroxymidazolam and α -Hydroxytriazolam

AMINES CONFIRMATION by LC-MS/MS: (±)-Amphetamine, beta-Phenethylamine, 3,4-Methylenedioxy-N-ethylamphetamine (MDEA), (±)-Methamphetamine, Methylenedioxyamphetamine (MDA), Methylenedioxymethamphetamine (MDMA), Ephedrine/Pseudoephedrine

FENTANYL and ANALOGUES CONFIRMATION by LC-MS/MS: N-Methyl norfentanyl, Norfentanyl, Norcarfentanil, AP-238, 2MAP-237, Methoxyacetyl fentanyl, Acetyl fentanyl, Beta-hydroxy fentanyl, Benzyl fentanyl, THF fentanyl, 4-ANPP, p-Methoxyacetyl fentanyl, Acryl fentanyl, Alfentanil, Fentanyl, para-Fluoro acryl fentanyl, para-Fluoro fentanyl, Cyclopropyl fentanyl, 2-Furanyl fentanyl, Fentanyl carbamate, (±)-trans-3-Methylfentanyl, Crotonyl fentanyl, Carfentanil, (±)-cis-3-Methylfentanyl, Butyryl fentanyl, para-Fluoroisobutyryl fentanyl (FIBF), Sufentanil, Phenyl fentanyl, Cyclopentenyl fentanyl, para-Fluorofuranyl fentanyl, Valeryl fentanyl, Isobutyryl fentanyl, Thiophene fentanyl, Isovaleryl fentanyl; plus Metonitazene, Brorphine, Isotonitazene, Protonitazene

SENT TO REFERENCE LABS: Synthetic Cannabinoids, Cathinones, Cyanide, GHB, LSD, Psilocin, Valproic Acid, heavy metals (Antimony, Arsenic, Lead, Barium, Cadmium, Bismuth, Mercury, Selenium), or any other compounds not listed above

ABBREVIATIONS: UNS = Specimen unsuitable for testing; QNS = Quantity insufficient for analysis; < = less than; > = greater than; LRL= Lower reporting limit; C.L. = Confidence Level

UNITS FOR VOLATILES: 100 mg/dL $\equiv$ 0.100 g/dL $\equiv$ 0.100 g/%. UNITS: 1 mg/L = 1000 μ g/L = 1000 ng/mL