

# Cuyahoga County Regional Forensic Science Laboratory Toxicology Unit

## Scope of Testing

### Analysis Summary

**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 GC/MS and GC/FID:** Butalbital, Caffeine, Carbamazepine, Carisoprodol, Ibuprofen, Levetiracetam, Meprobamate, Metaxalone, Pentobarbital, Phenobarbital, Phenytoin. **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- $\Delta$ -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

**ACETAMINOPHEN and SALICYLATES SCREEN by Colorimetry (Qualitative):** Acetaminophen, Salicylates

**PHENCYCLIDINE (PCP) CONFIRMATION by GC/MS:** Phencyclidine

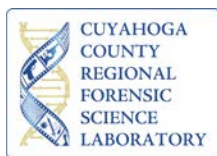
**CLINICAL CHEMISTRIES:** Sodium, Potassium, Chloride, Glucose, Urea (as VUN), Creatinine, Magnesium, Calcium, Lactate

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

**CANNABINOIDS CONFIRMATION by LC-MS/MS:**  $\Delta$ 9-THC, 11-OH- $\Delta$ 9-THC (marijuana metabolite), 11-nor- $\Delta$ 9-THC-COOH (marijuana metabolite). **CANNABINOIDS CONFIRMATION by GC/MS:** TOTAL 11-nor- $\Delta$ 9-THC-COOH (marijuana metabolite)

**OPIOIDS CONFIRMATION by GC/MS:** Morphine, 6-Acetylmorphine (heroin metabolite), Codeine, Hydrocodone, Dihydrocodeine, Hydromorphone, Oxycodone; Oxymorphone

**BENZODIAZEPINES CONFIRMATION by LC-MS/MS:** ( $\pm$ )-Zopiclone, 2-Hydroxyethylflurazepam, 3-Hydroxyflunitrazepam, 4-Hydroxyalprazolam, 7-Aminoclonazepam, 7-Aminoflunitrazepam, Alprazolam, Bromazepam, 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,  $\alpha$ -Hydroxyalprazolam,  $\alpha$ -Hydroxymidazolam and  $\alpha$ -Hydroxytriazolam



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**AMINES CONFIRMATION by LC-MS/MS analysis:** (±)-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, Brophine, 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  $\mu$ g/L = 1000 ng/mL