

Drug metabolism pathways (Urine)

| Class | Analyte | Metabolite | Class | Analyte | Metabolite | Class | Analyte | Metabolite | Class | Analyte | Metabolite | | | | |
|------------------------------------|---|--|---|---|---------------------------------------|--------------------------------------|--|---|---|----------------------------------|---|--|--|--------------------------------------|--------------------------------|
| Amphetamines | Methamphetamine (Desoxyn, Didrex) | 2-72 hours → Amphetamine | Benzodiazepines | Alprazolam (Xanax) | 1-3 days → Alpha-Hydroxyalprazolam | Fentanyl analogs** | Fentanyl / Acetyl fentanyl / Acrylfentanyl / Butyryl fentanyl / Furanyl fentanyl | 1-3 days → Despropionyl fentanyl / 4-ANPP | Natural opiates & semi-synthetic opioids | Codeine (Tylenol III, IV) | 1-3 days → Morphine / Hydrocodone | | | | |
| | Amphetamine (Adderall, Vyvanse) | 2-72 hours | | Flurazepam (Dalmane)* | → 2-Hydroxyethylflurazepam | | 1-2 days | 4-Fluoroisobutyryl fentanyl (4-FIBF) | | 1-3 days | Hydrocodone (Norco, Vicodin, Zohydro, Lortab) | 1-3 days → Norhydrocodone / Dihydrocodeine / Hydromorphone | 1-3 days | | |
| | Methylphenidate (Ritalin, Concerta)* | → Ritalinic Acid | | 1-3 days | Clonazepam (Klonopin) | | >1 day → 7-Aminoclonazepam | 1-5 days | | 4-Fluorobutyryl fentanyl (4-FBF) | 1-3 days | Morphine (MS Contin) | 1-3 days → Hydromorphone | | |
| Antiepileptics | Gabapentin (Gralise, Horizant, Neurontin) | 1-7 days | Midazolam (Versed)* | → Alpha-Hydroxymidazolam | 1-3 days | Acetyl fentanyl | 1-3 days → Acetyl norfentanyl / 4-ANPP | 1-3 days | Hydromorphone (Dilaudid) | 1-3 days | Oxycodone (Percocet) | 2-72 hours → Noroxycodone / Oxymorphone | 2-72 hours | | |
| | Pregabalin (Lyrica) | 1-7 days | Lorazepam (Ativan) | 1-5 days | Diazepam (Valium) | 1-10 days → Nordiazepam / Temazepam | 1-10 days | Acrylfentanyl | 1-3 days → 4-ANPP | 1-3 days | Oxymorphone (Opana) | 2-72 hours | Buprenorphine (Suboxone) | 2-72 hours → Norbuprenorphine | 2-72 hours |
| Antidepressants | Amitriptyline (Elavil) | 1-10 days → Nortriptyline | Temazepam (Restoril) | 1-5 days → Oxazepam | 1-5 days | Alfentanil (Alfenta) | 1-3 days | α-methyl fentanyl | 1-3 days | Naloxone (Suboxone) | 2-24 hours | Heroin | 2-72 hours → 6-acetylmorphine / Morphine / Hydromorphone | 2-72 hours | |
| | Nortriptyline (Pamelor) | 1-10 days | Designer drugs & others** | - | → 5-fluoro ADB metabolite 2 | 1-3 days | β-Hydroxythiofentanyl | 1-3 days | Butyryl norfentanyl / 4-ANPP | 1-3 days | Recreational substances | Alcohol* | → Ethyl Sulfate / Ethyl Glucuronide | 1-3 days | |
| | Imipramine (Tofranil) | 1-10 days → Desipramine | | - | → 5-fluoro ADB metabolite 7 | 1-3 days | Carfentanil | 1-3 days → Norcarfentanil | 1-3 days | Marijuana* | | → THC-COOH | up to 30 days | | |
| | Desipramine (Norpramin) | 1-3 days | | - | → 5-fluoro AMB metabolite 7 | 1-3 days | cis-3-Methylfentanyl | 1-3 days | Cyclopropyl norfentanyl | 1-3 days | Sedatives & hypnotics | Ketamine (Ketalar) | 2-48 hours → Norketamine | 2-48 hours | |
| | Clomipramine (Anafranil) | 1-3 days → N-Desmethylclomipramine | AB-CHMINACA | 1-3 days → AB-CHMINACA metabolite M4 | 1-3 days | Cyclopropyl fentanyl | 1-3 days → 4-ANPP / Furanyl norfentanyl | 1-3 days | Zolpidem (Ambien, Edluar, Intermezzo) | 1-4 days | | Synthetic opioids | Zaleplon (Sonata) | 1-3 days | |
| | Doxepin (Silenor) | 1-3 days → N-Desmethyldoxepin | 1-3 days | → AB-FUBINACA metabolite 4 | 1-3 days | Furanyl fentanyl | 1-3 days → Isobutyryl norfentanyl | 1-3 days | Muscles relaxants | Fentanyl (Actiq, Duragesic) | | | 2-72 hours → Norfentanyl | 2-72 hours | |
| | Citalopram (Celexa, Lexapro) | 1-3 days → N-Desmethylcitalopram | 1-3 days | → AB-FUBINACA metabolite 3 | 1-3 days | Isobutyryl fentanyl | 1-3 days | U-47700 | | 1-3 days → N-Desmethyl U-47700 | 1-3 days | | Meperidine (Demerol) | 1-3 days → Normeperidine | 1-3 days |
| | Fluoxetine (Prozac) | 1-3 days → Norfluoxetine | 1-3 days | MMB-FUBINACA | 1-3 days → AB-FUBINACA metabolite 3 | 1-3 days | Methoxyacetyl fentanyl | 1-3 days | | U-49900 | 1-3 days | Tapentadol (Nucynta) | 1-3 days | Tramadol (Ultram) | 1-3 days → O-Desmethyltramadol |
| | Duloxetine (Cymbalta) | 1-3 days | AB-PINACA | 1-3 days → AB-PINACA 4-hydroxypentyl metabolite | 1-3 days | Ortho-fluorofentanyl | 1-3 days | Ocfentanil | 1-3 days | U-51754 | 1-3 days | Naltrexone (Embeda, Vivitrol) | 1-3 days → 6-β-Naltrexol | 1-3 days | |
| | Paroxetine (Paxil) | 1-3 days | → AB-PINACA 5-pentanoic acid metabolite | 1-3 days | Para-fluorofentanyl | 1-3 days | Ortho-fluorofentanyl | 1-3 days | Sufentanil (Dsuvia) | 1-3 days | Valeryl fentanyl | 1-3 days | Dextromethorphan (Robitussin DM) | 1-3 days → Dextrorphan (Levorphanol) | 1-3 days |
| | Sertraline (Zoloft) | 1-3 days | ADB-FUBINACA | 1-3 days | → AM-2201-4-hydroxypentyl metabolite | 1-3 days | Sufentanil (Dsuvia) | 1-3 days | U-47700 | 1-3 days | Illicit drugs | Heroin* | → 6-Acetylmorphine | 1-2 days | |
| | Venlafaxine (Effexor) | 1-3 days → O-Desmethylvenlafaxine (Pristique) | 1-3 days | MAB-CHMINACA | 1-3 days → MAB-CHMINACA metabolite M1 | 1-3 days | → UR-144 5-hydroxypentyl metabolite | 1-3 days | U-49900 | 1-3 days | | | ↓ | → Morphine | 1-3 days |
| | Bupropion (Wellbutrin, Zyban, Contrave) | 1-3 days → Hydroxybupropion | 1-3 days | → MAB-CHMINACA metabolite M11 | 1-3 days | → UR-144 5-pentanoic acid metabolite | 1-3 days | → UR-144 5-pentanoic acid metabolite | 1-3 days | U-51754 | | 1-3 days | | → Benzoyllecgonine | 1-5 days |
| Trazodone | 1-3 days | MAB-CHMICA | 1-3 days | → MDMB-FUBINACA metabolite M1 | 1-3 days | → XLR-11 4-hydroxypentyl metabolite | 1-3 days | Valeryl fentanyl | 1-3 days | | | | | | |
| O-Desmethylvenlafaxine (Pristique) | 1-3 days | MMB-CHMICA | 1-3 days | → MDMB-FUBINACA metabolite M1 | 1-3 days | | | | | | | | | | |
| Antipsychotics | Chlorpromazine | 1-3 days | - | → UR-144 5-hydroxypentyl metabolite | 1-3 days | | | | | | | | | | |
| | Clozapine (Clozaril) | 1-3 days | Mitragyne (Kratom) | 1-3 days | | | | | | | | | | | |
| | Fluphenazine | 1-3 days | | | | | | | | | | | | | |
| | Haloperidol (Haldol) | 1-3 days | | | | | | | | | | | | | |
| | Olanzapine (Zyprexa) | 1-3 days | | | | | | | | | | | | | |
| | Quetiapine (Seroquel) | 1-3 days → Norquetiapine / 7-Hydroxyquetiapine | 1-3 days | | | | | | | | | | | | |
| Risperidone (Risperdal) | 1-3 days → 9-Hydroxyrisperidone | 1-3 days | | | | | | | | | | | | | |
| Barbiturates | Amobarbital | 1-3 days | | | | | | | | | | | | | |
| | Pentobarbital (Nembutal) | 1-3 days | | | | | | | | | | | | | |
| | Butalbital (Fioricet) | 1-3 days | | | | | | | | | | | | | |
| | Secobarbital (Seconal) | 1-7 days | | | | | | | | | | | | | |
| | Phenobarbital | 1-15 days | | | | | | | | | | | | | |

Note: Times indicated represent detection windows

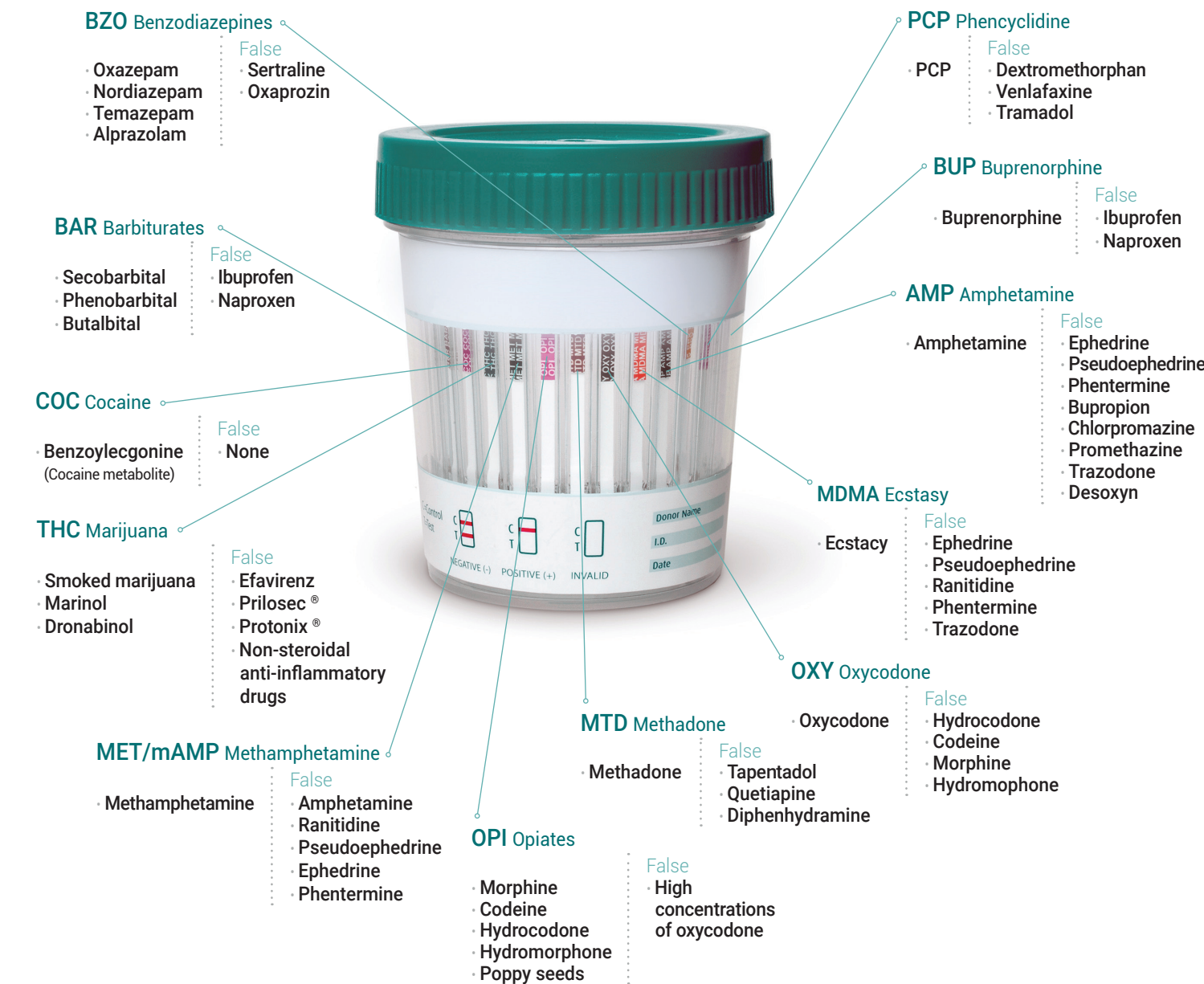
* Metabolite(s) of this substance are tested by Acūtis.

**Metabolic windows for this section are presumptive and are based on limited available clinical data.

Common drugs & most popular street names

| | |
|----------------------|--|
| Adderall | Uppers · Beans · Black Beauties · Dexies · Speed · Zing |
| Alcohol | Booze · Juice · Hooch · Sauce |
| Barbiturates | Barbs · Phennies · Red Birds · Reds · Yellow Jackets |
| Cocaine | Blow · Bump · Charlie · Coke · Snow, Toot |
| Codeine | Captain Cody · Lean · Purple Drank · Sizzurp |
| Crack | Candy · Flake · Rock |
| Crystal Meth | Batu · Blade · Crystal · Glass · Hot Ice · Quartz · Shabu · Tina |
| Dextromethorphan | CCC · Dex · Robotripping · Skittles · Triple C · Velvet · Red Devils |
| Fentanyl | Apache · China Girl · China town · King Ivory · Murder 8 · Tango and Cash · TNT |
| Gabapentin | Johnnies |
| Heroin | Brown Sugar · China White · Dope · Junk · Smack · Tar |
| Hydromorphone | D · Dillies · Footballs · Juice |
| Ketamine | Jet K · Kit Kat · Special K · Vitamin K |
| Kratom | Biak-biak · Ketum · Kahuum · Thom |
| Marijuana | Aunt Mary · Blunt · Bud · Ganja · Grass · Herb · Mary Jane · Reefer · Skunk · Weed |
| MDMA | Adam · Beans · Disco Biscuit · E · Eve · Molly · X · XTC |
| Methadone | Amidone · Fizzies · Dollies · Chocolate Chip Cookies |
| Methamphetamine | Crank · Crystal · Glass · Meth · Speed · Tweak |
| Morphine | Miss Emma · Monkey · White Stuff |
| Oxycontin | Oxy · Blue · 512s · Kickers · Killers · Hillbilly Heroin |
| Oxymorphone | Blue Heaven · Blues · Heavenly Blues · O Bombs · Octagons · Stop Signs |
| PCP | Angel Dust · Love Boat · Peace Pill · Sherm |
| Ritalin | R-ball · Diet Coke · Skippy · Pineapple · Kibbles and Bits · Skittles · Smarties |
| Synthetic Cathinones | Bloom · Cloud Nine · Cosmic Blast · Ivory Wave · Lunar Wave · Scarface · Vanilla Sky · White Lightening |
| Synthetic Marijuana | K2 · Spice · Black Mamba · Bliss · Bombay Blue · Genie · Moon Rocks · Yucatan |
| Vicodin | Vikes · Vics · Vicos · Hydros · Lorris · Fluff · Scratch · Idiot Pills · Tabs · Watsons · 357s |
| Xanax | Xannies · Bars · Z-Bars · Handlebars · Planks · Bricks · Blue Footballs · Yellow Boys · White Boys · White Girls |

Possible sources of true & false positives on in-office POC



Urine screening cutoff values comparison

| Test abbreviation Drug or drug class | POC cup cutoff (ng/mL) | Traditional EIA urine screening cutoff (ng/mL) | Acutis NextGen screening - LC-MS/MS urine cutoff (ng/mL) |
|---|------------------------|--|--|
| AMP Amphetamine | 1000 | 1000 | 100** |
| BAR Barbiturates | 300 | 200 | 100 |
| BUP Buprenorphine | 10 | 5 | 10 |
| BZO Benzodiazepines | 300 | 200 | 50 |
| COC Cocaine | 300 | 150 | 50 |
| FENT Fentanyl | - | 1 | 5 |
| HDC Hydrocodone | - | 100 | 50 |
| MTD Methadone | 300 | 300 | 50 |
| MET/mAMP Methamphetamine | 1000 | - | 100 |
| MDMA Ecstasy | 500 | - | 100 |
| OPI Opiates | 300 | 300 | 50 |
| OXY Oxycodone | 100 | 100 | 50 |
| PCP Phencyclidine | 25 | 25 | 25 |
| THC Marijuana | 50 | 50 | 50** |

**Note: these compounds are tested using EIA screening.



Quick reference guide for clinical toxicology

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