

**Wisconsin State Crime Laboratory - Milwaukee
GCMS Drug MU Summary**

DRUG	%EU	CONFIDENCE	LINEAR RANGE	LRL
AMPHETAMINES			(ug/L)	(ug/L)
Amphetamine	16	95.45%	40-1000	8.0
Phentermine^				8.0
Methamphetamine	18	95.45%	40-1000	8.0
Ephedrine	17	95.45%	40-1000	8.0
Pseudoephedrine	17	95.45%	40-1000	8.0
MDA	19	95.45%	40-1000	8.0
MDMA	18	95.45%	40-1000	8.0
COCAINE & METABOLITES			(ug/L)	(ug/L)
EME	16	95.45%	25-500	5.0
Cocaine	13	95.45%	25-500	5.0
Cocaethylene	23	95.45%	25-500	5.0
Benzoylcegonine	14	95.45%	50-1500	10
CANNABINOIDS			(ug/L)	(ug/L)
Delta-9-THC	21	95.45%	1.0-45	1.0*
11-Hydroxy-THC	16	95.45%	1.0-45	0.20
Carboxy-THC	22	95.45%	5.0-250	1.0
OPIOIDS			(ug/L)	(ug/L)
Codeine	21	95.45%	10-500	2.0
Hydrocodone	23	95.45%	10-500	2.0
Oxycodone	24	95.45%	10-500	2.0
Oxymorphone	20	95.45%	10-500	2.0
Morphine	18	95.45%	10-500	2.0
Hydromorphone	24	95.45%	10-500	2.0
6-Monoacetylmorphine	21	95.45%	10-500	2.0

The traceability for the measurement process includes certified reference material from approved vendors (i.e., Cerilliant and Cayman), calibrated volumetric flask (i.e., class A calibrated), and annual pipette calibration performed by an approved ISO service provider.

DRUG	%EU	CONFIDENCE	LINEAR RANGE	LRL
MISC DRUGS				
Amitriptyline	8.5	95.45%	25-500 ug/L	5.0 ug/L
Nortriptyline	18	95.45%	25-500 ug/L	5.0 ug/L
Butalbital	14	95.45%	100-2500 ug/L	20 ug/L
Phenobarbital	28	95.45%	50-1500 ug/L	10 ug/L
Carbamazepine	12	95.45%	1.0-20 mg/L	0.20 mg/L
Carisoprodol	12	95.45%	50-1500 ug/L	10 ug/L
Meprobamate	9.7	95.45%	50-1500 ug/L	10 ug/L
Chlorpheniramine	5.2	95.45%	50-1000 ug/L	10 ug/L
Citalopram/Escitalopram	11	95.45%	25-1000 ug/L	5.0 ug/L
Cyclobenzaprine	23	95.45%	25-500 ug/L	5.0 ug/L
Diphenhydramine	21	95.45%	25-1000 ug/L	5.0 ug/L
Doxepin	20	95.45%	50-1000 ug/L	10 ug/L
Norfentanyl	9.6	95.45%	5.0-150 ug/L	1.0 ug/L
Fentanyl	13	95.45%	5.0-150 ug/L	1.0 ug/L
Fluoxetine	15	95.45%	50-1000 ug/L	10 ug/L
Gabapentin	13	95.45%	1.0-20 mg/L	0.20 mg/L
GHB	25	95.45%	5.0-50 mg/L	5.0 mg/L*/ 10 mg/L**
Imipramine	9.1	95.45%	50-1000 ug/L	10 ug/L
Desipramine	13	95.45%	50-1000 ug/L	10 ug/L
Ketamine	19	95.45%	25-1000 ug/L	5.0 ug/L
Norketamine	22	95.45%	25-1000 ug/L	5.0 ug/L
Lamotrigine	23	95.45%	100-2000 ug/L	20 ug/L
Meperidine	4.1	95.45%	50-1000 ug/L	10 ug/L
Normeperidine	8.7	95.45%	50-1000 ug/L	10 ug/L
EDDP	11	95.45%	25-1000 ug/L	5.0 ug/L
Methadone	12	95.45%	25-1000 ug/L	5.0 ug/L
Salicylic Acid	17	95.45%	1.0-20 mg/L	0.20 mg/L
Acetaminophen	21	95.45%	1.0-20 mg/L	0.20 mg/L
Phenacetin	19	95.45%	1.0-20 mg/L	0.20 mg/L
Ibuprofen	23	95.45%	1.0-20 mg/L	0.20 mg/L
Naproxen	19	95.45%	1.0-20 mg/L	0.20 mg/L
PCP	13	95.45%	10-500 ug/L	2.0 ug/L
Phenytoin	27	95.45%	100-2000 ug/L	20 ug/L
Sertraline	22	95.45%	25-1000 ug/L	5.0 ug/L
Topiramate	9.7	95.45%	250-5000 ug/L	50 ug/L
Tramadol	14	95.45%	25-1000 ug/L	5.0 ug/L
Trazodone	16	95.45%	100-1500 ug/L	20 ug/L
Venlafaxine	11	95.45%	50-1000 ug/L	10 ug/L
O-desmethylvenlafaxine	8.9	95.45%	50-1000 ug/L	10 ug/L

*Administrative LRL in blood

**Administrative LRL in urine

^Qualitative only

TXRL Milwaukee Toxicology Drug MU Summary				
Doc ID: 23708	Revision: 11	Status: Published	Effective:	1/21/2025 6:27:19 PM
Approved following the Wisconsin State Crime Lab Quality System procedures.				

Wisconsin State Crime Laboratory - Milwaukee
LCMSMS Drug MU Summary

DRUG	%EU	CONFIDENCE	LINEAR RANGE	Administrative LRL (blood)	Estimated LOD (urine)	Estimated LOD (plasma)	Estimated LOD (serum)
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
BUPRENORPHINE							
Norbuprenorphine	15	95.45%	0.50-20	0.50	0.50		
Buprenorphine	16	95.45%	0.50-20	0.50	0.50		
BENZODIAZEPINES/Z-DRUGS							
7-Amino-clonazepam	15	95.45%	5.0-240	5.0	4.0		
Alprazolam	13	95.45%	5.0-240	5.0	5.0		
Clonazepam	15	95.45%	5.0-240	4.0	2.5		
Diazepam	16	95.45%	10-1000	8.0	10		
Etozolam	18	95.45%	5.0-240	5.0	5.0		
Lorazepam	16	95.45%	5.0-240	5.0	5.0		
Nordiazepam	13	95.45%	10-1000	10	10		
Chazepam	18	95.45%	10-1000	5.0	10		
Temazepam	18	95.45%	10-1000	8.0	5.0		
Zolpidem	15	95.45%	5.0-240	2.0	0.50		
Alpha-hydroxy-alprazolam	17	95.45%	5.0-240	4.0	4.0		
FENTANILS AND NITAZENES							
Fentanyl	19	95.45%	0.50-150	0.25	0.50	1.0	0.25
Norfentanyl	18	95.45%	0.50-150	0.50	1.0	1.0	1.0
STIMULANTS AND HALLUCINOGENS							
Egonine methyl ester	15	95.45%	5.0-500	5.0	5.0	5.0	5.0
Cocaine	15	95.45%	5.0-500	2.5	1.3	1.3	1.3
Cocaine/ethylene	15	95.45%	5.0-500	1.3	5.0	2.5	2.5
Benzoylcegonine	20	95.45%	20-1500	20	20	20	40
Amphetamine	17	95.45%	10-1000	2.5	5.0	5.0	5.0
Methamphetamine	17	95.45%	10-1000	10	10	10	10
Pseudoephedrine	17	95.45%	10-1000	10	20	10	20
MDA	15	95.45%	10-1000	10	10	10	20
MDMA	17	95.45%	10-1000	10	10	10	10
MDEA	15	95.45%	10-1000	10	10	10	10
Ketamine	19	95.45%	10-1000	10	20	10	10
Norketamine	16	95.45%	10-1000	5.0	10	5.0	5.0
PCP	16	95.45%	10-500	2.5	10	10	10
CANNABINOIDS							
Delta-9-THC	14	95.45%	1.0-100	1.0	1.0*	1.0*	1.0*
Delta-8/9-OH-THC	15	95.45%	1.0-100	1.0	1.0*	1.0*	1.0*
Delta-9-carboxy-THC	12	95.45%	5.0-250	2.5	5.0*	5.0*	5.0*
Delta-8-THC	17	95.45%	1.0-100	0.50	1.0*	1.0*	1.0*
Delta-8-carboxy-THC	12	95.45%	5.0-250	2.5	5.0*	5.0*	5.0*

*Administrative LRL

The traceability for the measurement process includes certified reference material from approved vendors (i.e., Cerilliant and Cayman), calibrated volumetric flask (i.e., class A calibrated), and annual pipette calibration performed by an approved ISO service provider.

QUALITATIVE ONLY DRUGS	Estimated LOD (blood)	Estimated LOD (urine)	Estimated LOD (plasma)	Estimated LOD (serum)
	(ug/L)	(ug/L)	(ug/L)	(ug/L)
BENZODIAZEPINES/Z-DRUGS				
7-Amino-flunitrazepam	5.0	5.0		
Flunitrazepam	5.0	5.0		
Midazolam	8.0	8.0		
Alpha-hydroxy-etazolam	5.0	5.0		
Triazolam	5.0	2.5		
Alpha-hydroxy-triazolam	5.0	5.0		
Bromazepam	2.5	5.0		
Bromazolam	5.0	5.0		
Chlordiazepoxide	5.0	5.0		
Clobazam	5.0	5.0		
2-Hydroxy-ethyl-flurazepam	4.0	4.0		
Clonazepam	5.0	5.0		
8-Amino-clonazepam	5.0	5.0		
Alpha-hydroxy-clonazepam	5.0	5.0		
Delorazepam	4.0	2.5		
Demosecam	5.0	2.5		
Diclozepam	2.5	1.0		
Estazolam	10	5.0		
Fluiprazolam	5.0	5.0		
Flubromazepam	5.0	5.0		
Flubromazolam	5.0	5.0		
Alpha-hydroxy-flubromazolam	5.0	5.0		
Flurazepam	5.0	5.0		
Lormetazepam	5.0	5.0		
Nimetazepam	5.0	5.0		
Nitrazepam	2.5	4.0		
Norchlordiazepoxide	5.0	2.5		
Phenazepam	5.0	4.0		
Pyrazolam	5.0	5.0		
Zaleslon	4.0	4.0		
Zopiclone	1.0	2.5		
Adinazolam	5.0	5.0		
FENTANILS AND NITAZENES				
AP-235	0.50	1.0	0.50	0.20
4-ANPP	0.20	5.0	1.0	1.0
4-Hydroxy-xylazine	1.0	3.0	3.0	3.0
2-Methyl-AP-237	0.50	1.0	1.0	0.50
Acetyl fentanyl	0.20	1.0	0.20	0.20
Acetyl norfentanyl	3.0	3.0	3.0	3.0
Acryl fentanyl	1.0	1.0	1.0	1.0
Broprhine	0.20	1.0	0.50	1.0
Butonitazene	0.20	5.0	1.0	1.0
Butyl fentanyl	3.0	3.0	3.0	1.0
Carfentanil	3.0	3.0	3.0	1.0
Dipranone	1.0	1.0	1.0	3.0
Ethyleneoxyvitazene	1.0	1.0	0.50	1.0
Etodemitazene	5.0	5.0	1.0	1.0
Etonitazene	3.0	3.0	1.0	3.0
Flunitazene	0.50	1.0	0.50	1.0
Furanyl fentanyl	0.20	1.0	0.50	0.50
Isotonitazene	0.50	1.0	1.0	1.0
Misotonitazene	3.0	3.0	1.0	1.0
N-desethyl isotonitazene	1.0	5.0	1.0	3.0
N-piperidinyl etonitazene	1.0	5.0	1.0	3.0
N-pyrrolidine protonitazene	1.0	5.0	1.0	3.0
N-pyrrolidine etodemitazene	5.0	5.0	3.0	3.0
N-pyrrolidine etonitazene	3.0	5.0	3.0	3.0
N-pyrrolidine isotonitazene	0.50	5.0	3.0	3.0
Protonitazene	1.0	3.0	3.0	3.0
Valeryl fentanyl	0.50	3.0	1.0	3.0
Xylazine	1.0	1.0	0.50	1.0
3-methylfentanyl	0.20	1.0	0.20	0.20
Meta/Ortho/Para-fluorofentanyl	0.20	1.0	0.50	0.20
Para-methoxybutyl fentanyl	0.20	1.0	0.50	0.50
STIMULANTS AND HALLUCINOGENS				
Ephedrine/Pseudoephedrine	4.0	4.0	4.0	4.0
Norephedrine/Norpseudoephedrine	4.0	4.0	4.0	4.0
Cathinone	2.0	2.0	2.0	2.0
N-ethylamphetamine	2.0	4.0	4.0	4.0
2-Fluoro deschloroketamine	2.0	2.0	2.0	4.0
Deschloroketamine	2.0	2.0	4.0	4.0
Fluorexetine	2.0	2.0	4.0	4.0
3/4-Hydroxy-PCP	4.0	4.0	4.0	4.0
3/4-Methoxy-PCP	1.6	2.0	4.0	4.0
N,N-dimethylpentylone	4.0	4.0	2.0	INC
Pentylone	2.0	2.0	2.0	INC
Eutylone	2.0	2.0	4.0	4.0
N-cyclohexyl-methylone	2.0	4.0	4.0	4.0
3-PHP/PHP	4.0	4.0	4.0	8.0
3,4-MDPHP	1.0	2.0	2.0	4.0
N-cyclohexyl-butylone	2.0	2.0	2.0	4.0
N-propyl-butylone	2.0	4.0	4.0	4.0
3/4-Methylmethcathinone	8.0	12	14	8.0
MOPV	2.0	2.0	2.0	2.0
Methylone	0.80	1.0	2.0	1.0
Methedrone	2.0	2.0	2.0	4.0
Methylphenidate	5.0	20	5.0	20
Atomoxetine	10	10	10	20
Phenethylamine	4.0	4.0	4.0	4.0
Phenmetrazine	8.0	6.0	8.0	4.0
Bupropion	0.80	2.0	2.0	2.0
Hydroxybupropion	2.0	2.0	2.0	2.0
CANNABINOIDS				
Cannabidiol (CBD)	0.50	1.0	1.0	1.0
THC-O-Acetate	1.0	1.0	1.0	1.0
Delta-10-THC	1.0	1.0	1.0	1.0

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