

Kansas Bureau of Investigation Forensic Science Laboratory  
Toxicology Section Scope of Testing and Reporting Information

Volatiles Analysis				
Compound	Screen Method	Confirmation Method	Blood Reporting	Urine Reporting
1,1-difluoroethane	HSGC/FID/MS	HSGC/FID/MS	Positive ≥ ~10 µg/mL	Positive ≥ ~10 µg/mL
acetone	HSGC/FID/MS	HSGC/FID/MS	Positive	Not part of routine testing
ethanol	HSGC/FID/MS	HSGC/FID/MS	Quantitative ≥ 0.01 g/100 mL	Positive ≥ 0.01 g/100 mL
isopropanol	HSGC/FID/MS	HSGC/FID/MS	Positive	Not part of routine testing
methanol	HSGC/FID/MS	HSGC/FID/MS	Positive	Not part of routine testing
toluene <sup>1</sup>	HSGC/FID/MS	HSGC/FID/MS	Positive	Not part of routine testing

Immunoassay Analysis (Screen)				
Drug/Drug Class	Method	Cutoff (blood / urine)	Blood Reporting	Urine Reporting
barbiturates	ELISA	100 ng/mL / 100 ng/mL	Positive	Positive
benzodiazepines <sup>2</sup>	ELISA	10 ng/mL / 50 ng/mL	Positive	Positive
cannabinoids	ELISA	10 ng/mL / 20 ng/mL	Positive	Positive
cocaine metabolites <sup>2</sup>	ELISA	50 ng/mL / 150 ng/mL	Positive	Positive
methamphetamine/MDMA <sup>2</sup>	ELISA	20 ng/mL / 200 ng/mL	Positive	Positive
opiates <sup>2</sup>	ELISA	10 ng/mL / 200 ng/mL	Positive	Positive
oxycodone <sup>2</sup>	ELISA	10 ng/mL / 100 ng/mL	Positive	Positive
phencyclidine (PCP) <sup>2</sup>	ELISA	10 ng/mL / 25 ng/mL	Positive	Positive

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**Drug Analysis**

Drugs outside of this scope may be reported as positive if they meet the analytical criteria for positive reporting as defined by the KBI Forensic Science Laboratory Toxicology Section.

<u>Cannabinoids</u>	<u>Screen Method</u>	<u>Confirmation Method</u>	<u>Blood Reporting</u>	<u>Urine Reporting</u>	<u>Case Type</u>
delta-9 THC	ELISA screen for Delta-9 Carboxy THC	LC/MS-MS	Quantitative ≥ 1.0 ng/mL	Not part of routine testing	All
THC, 11-hydroxy	ELISA screen for Delta-9 Carboxy THC	LC/MS-MS	Quantitative ≥ 1.0 ng/mL	Not part of routine testing	All
delta-9 THC, carboxy	ELISA	LC/MS-MS (blood), GC/MS (urine)	Quantitative ≥ 5.0 ng/mL	Positive	All
delta-8 THC	ELISA screen for Delta-9 Carboxy THC	LC/MS-MS	Quantitative ≥ 1.0 ng/mL	Not part of routine testing	All

<u>General Drug Analysis</u>	<u>Screen Method</u>	<u>Confirmation Method</u>	<u>Blood Reporting</u>	<u>Urine Reporting</u>	<u>Case Type</u>
6-monoacetylmorphine (6-MAM)	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~5.0 ng/mL	All
alprazolam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~10 ng/mL	All
amitriptyline	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
amphetamine	LC/QTOF-MS, LC/MS-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
benzoylecgonine	LC/QTOF-MS, GC/MS, or ELISA	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
buprenorphine	LC/QTOF-MS or LC/MS-MS	LC/MS-MS	Positive ≥ 0.50 ng/mL	Positive ≥ ~1.0 ng/mL	All
buprenorphine, nor	LC/QTOF-MS or LC/MS-MS	LC/MS-MS	Positive ≥ 0.50 ng/mL	Positive ≥ ~1.0 ng/mL	All
bupropion	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
bupropion, hydroxy	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
butalbital	GC/MS or ELISA	GC/MS	Positive	Positive	All
bromazolam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 1.0 ng/mL	Positive ≥ ~1.0 ng/mL	All

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carbamazepine	LC/QTOF-MS or GC/MS	LC/MS-MS	Positive ≥ 1,000 ng/mL	unable to confirm	All
carisoprodol	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 0.50 mg/L	Positive	All
cetirizine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigations
chlordiazepoxide	LC/QTOF-MS or LC/MS-MS	LC/MS-MS	Positive ≥ 500 ng/mL	Positive ≥ ~10 ng/mL	All
chlorpheniramine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigations
citalopram/escitalopram	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
clonazepam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~10 ng/mL	All
clonazepam, 7-amino	LC/QTOF-MS or LC/MS-MS	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~10 ng/mL	All
cocaethylene	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS or GC/MS	Positive ≥ 5.0 ng/mL	Positive	All
cocaine	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS or GC/MS	Positive ≥ 5.0 ng/mL	Positive	All
codeine	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~10 ng/mL	All
cyclobenzaprine	LC/QTOF-MS or GC/MS	GC/MS	Positive ≥ 10 ng/mL	Positive	All
desipramine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigations
diazepam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~10 ng/mL	All
diazepam, nor	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~10 ng/mL	All
diphenhydramine	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
doxylamine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigations
fentanyl	LC/QTOF-MS or LC/MS-MS	LC/MS-MS	Positive ≥ 0.50 ng/mL	Positive ≥ ~1.0 ng/mL	All
fentanyl, nor	LC/QTOF-MS or LC/MS-MS	LC/MS-MS	Positive ≥ 1.0 ng/mL	Positive ≥ ~5.0 ng/mL	All
fluoxetine	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All

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gabapentin	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 1,000 ng/mL	Positive	All
GHB	GC/MS	unable to confirm	Positive ≥ 2.0 µg/mL (screen only)	Positive ≥ 10 µg/mL (screen only)	DFC
hydrocodone	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~ 10 ng/mL	All
hydromorphone	LC/QTOF-MS, LC/MS-MS, GC/MS or ELISA	LC/MS-MS	Positive ≥ 1.0 ng/mL	Positive ≥ ~ 10 ng/mL	All
hydroxyzine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
imipramine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
ketamine	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
ketamine, nor	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
lamotrigine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
levetiracetam	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
lorazepam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~ 10 ng/mL	All
MDA	LC/QTOF-MS, LC/MS-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
MDMA	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
meprobamate	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 0.50 mg/L	Positive	All
methadone	LC/QTOF-MS, LC/MS-MS, or GC/MS	LC/MS-MS	Positive ≥ 10 ng/mL	Positive ≥ ~ 20 ng/mL	All
methamphetamine	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
methorphan	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
midazolam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ ~ 10 ng/mL	Positive ≥ ~ 10 ng/mL	DFC, Death Investigation
mirtazapine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
mitragynine	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All

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morphine	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~ 10 ng/mL	All
nortriptyline	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
olanzapine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
oxazepam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~ 10 ng/mL	All
oxcarbazepine	LC/QTOF-MS or GC/MS	LC/MS-MS	Positive ≥ 1,000 ng/mL	unable to confirm	All
oxycodone	LC/QTOF-MS, LC/MS-MS, GC/MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~ 10 ng/mL	All
oxymorphone	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 1.0 ng/mL	Positive ≥ ~ 5.0 ng/mL	All
paroxetine	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
phencyclidine (PCP)	LC/QTOF-MS, GC/MS, or ELISA	LC/MS-MS or GC/MS	Positive ≥ 5.0 ng/mL	Positive	All
phenobarbital	GC/MS or ELISA	GC/MS	Positive	Positive	All
phentermine	LC/QTOF-MS, LC/MS-MS, or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 50 ng/mL	Positive	All
promethazine	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
propofol	GC/MS	GC/MS	Positive	Positive	All
quetiapine	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
quetiapine, nor	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
sertraline	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
temazepam	LC/QTOF-MS, LC/MS-MS, or ELISA	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~ 10 ng/mL	All
tianeptine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	All
topiramate	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
tramadol	LC/QTOF-MS, LC/MS-MS, or GC/MS	LC/MS-MS	Positive ≥ 5.0 ng/mL	Positive ≥ ~ 10 ng/mL	All

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tramadol, o-desmethyl	LC/QTOF-MS, LC/MS-MS, or GC/MS	LC/MS-MS	Positive ≥ 50 ng/mL	Positive ≥ ~ 10 ng/mL	All
trazodone	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 10 ng/mL	Positive	All
valproic acid	GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
venlafaxine	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	DFC, Death Investigation
zolpidem	LC/QTOF-MS or GC/MS	LC/MS-MS or GC/MS	Positive ≥ 5.0 ng/mL	Positive	All
zopiclone	LC/QTOF-MS or GC/MS	GC/MS	Positive	Positive	All

<b>Routinely Requested Drugs Outside of Scope – Do Not Offer Testing</b>
aripiprazole
lithium
LSD
nitrous oxide
psilocin
stimulant, hallucinogen, and opioid novel psychoactive substances (NPS)
synthetic cannabinoids (“K2”, “spice”)

<sup>1</sup>Only when requested.

<sup>2</sup>Only for urine testing and when LC/QTOF-MS blood screening is not performed.

**Key**

DFC: Drug Facilitated Crime

ELISA: Enzyme-Linked ImmunoSorbent Assay

GC/MS: Gas Chromatography/Mass Spectrometry

HSGC/FID/MS: Headspace Gas Chromatography/Flame Ionization Detection/Mass Spectrometry

LC/MS-MS: Liquid Chromatography/Tandem Mass Spectrometry

LC/QTOF-MS: Liquid Chromatography/Quadrupole Time-of Flight-Mass Spectrometry