



NMS Labs

CONFIDENTIAL

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Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

Toxicology Report

Report Issued 11/05/2021 14:08

Patient Name HAZELWOOD, THOMAS
Patient ID 2021-00808
Chain 30278111
Age 18 Y **DOB** 06/08/2003
Gender Male
Workorder 21365317

To: **151468**
Fayette County Coroner
247 East 2nd Street

Lexington, KY 40507

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Positive Findings:

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>Matrix Source</u>
Ethanol	354	mg/dL	001 - Jugular Blood
Blood Alcohol Concentration (BAC)	0.354	g/100 mL	001 - Jugular Blood
Amphetamine	94	ng/mL	001 - Jugular Blood
Ethanol	249	mg/dL	003 - Urine
Amphetamine	Presump Pos	ng/mL	003 - Urine

See Detailed Findings section for additional information

Testing Requested:

<u>Analysis Code</u>	<u>Description</u>
1480B	Designer Opioids (2018 Scope), Blood
90028B	Drugs of Abuse Panel with Vitreous Alcohol Confirmation, Blood (Forensic) (CSA) - KY
90028U	Drugs of Abuse Panel, Urine (Forensic) (CSA) - KY

Specimens Received:

<u>ID</u>	<u>Tube/Container</u>	<u>Volume/ Mass</u>	<u>Collection Date/Time</u>	<u>Matrix Source</u>	<u>Labeled As</u>
001	Gray Top Tube	9.5 mL	10/18/2021 21:35	Jugular Blood	30278111
002	Gray Top Tube	8.25 mL	10/18/2021 21:35	Jugular Blood	30278111
003	White Plastic Container	23 mL	10/18/2021 21:35	Urine	30278111

All sample volumes/weights are approximations.
Specimens received on 10/20/2021.

Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Ethanol	354	mg/dL	10	001 - Jugular Blood	Headspace GC
Blood Alcohol Concentration (BAC)	0.354	g/100 mL	0.010	001 - Jugular Blood	Headspace GC
Ethanol	Confirmed	mg/dL	10	001 - Jugular Blood	Headspace GC
Amphetamine	94	ng/mL	5.0	001 - Jugular Blood	LC-MS/MS
Ethanol	249	mg/dL	10	003 - Urine	Headspace GC
Amphetamine	Presump Pos	ng/mL	100	003 - Urine	LC/TOF-MS
This test is an unconfirmed screen. Confirmation by a more definitive technique such as GC/MS is recommended.					
Ethanol	Confirmed	mg/dL	10	003 - Urine	Headspace GC

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

Reference Comments:

- Amphetamine - Jugular Blood:

Amphetamine (Adderall, Dexedrine) is a Schedule II phenethylamine CNS-stimulant. It is used therapeutically in the treatment of narcolepsy and obesity and also in the treatment of hyperactivity in children. Amphetamine has a high potential for abuse. When used in therapy, initial doses should be small and increased gradually. In the treatment of narcolepsy, amphetamine is administered in daily divided doses of 5 to 60 mg. For obesity and children with attention deficits, usual dosage is 5 or 10 mg daily.

Following a single oral dose of 10 mg amphetamine sulfate, a reported peak blood concentration of 40 ng/mL was reached at 2 hr. Following a single 30 mg dose to adults, an average peak plasma level of 100 ng/mL was reported at 2.5 hr. A steady-state blood level of 2000 - 3000 ng/mL was reported in an addict who consumed approximately 1000 mg daily.

Overdose with amphetamine can produce restlessness, hyperthermia, convulsions, hallucinations, respiratory and/or cardiac failure. Reported blood concentrations in amphetamine-related fatalities ranged from 500 - 41000 ng/mL (mean, 9000 ng/mL). Amphetamine is also a metabolite of methamphetamine, benzphetamine and selegiline.
- Ethanol (Ethyl Alcohol) - Jugular Blood:

Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples. The blood alcohol concentrations (BAC) can be expressed as a whole number with the units of mg/dL or as a decimal number with units of g/100 mL which is equivalent to % w/v. For example, a BAC of 85 mg/dL equals 0.085 g/100 mL or 0.085% w/v of ethanol.
- Ethanol (Ethyl Alcohol) - Urine:

Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded one (1) year from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.



Workorder 21365317 was electronically signed on 11/05/2021 13:53 by:

William M. Schroeder, M.S., D-ABFT-FT
Certifying Scientist

Analysis Summary and Reporting Limits:

All of the following tests were performed for this case. For each test, the compounds listed were included in the scope. The Reporting Limit listed for each compound represents the lowest concentration of the compound that will be reported as being positive. If the compound is listed as None Detected, it is not present above the Reporting Limit. Please refer to the Positive Findings section of the report for those compounds that were identified as being present.

Acode 1480B - Designer Opioids (2018 Scope), Blood - Jugular Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
2-Furanylfentanyl	0.050 ng/mL	U-51754	0.050 ng/mL
4-ANPP	0.10 ng/mL	Valeryl Fentanyl	0.050 ng/mL
Acryl Fentanyl	0.050 ng/mL	cis-3-Methylfentanyl	0.050 ng/mL
Butyrylfentanyl	0.050 ng/mL	meta-Methylmethoxyacetylfentanyl	0.050 ng/mL
Carfentanil	0.050 ng/mL	ortho-Fluorofentanyl	0.050 ng/mL
Cyclopropylfentanyl	0.050 ng/mL	para-Fluorobutyrylfentanyl	0.050 ng/mL
Isobutyrylfentanyl	0.050 ng/mL	para-Fluorofentanyl	0.050 ng/mL
Methoxyacetylfentanyl	0.050 ng/mL	para-Fluoroisobutyrylfentanyl	0.050 ng/mL
THF-F	0.050 ng/mL	para-Methylmethoxyacetylfentanyl	0.050 ng/mL
U-47700	0.050 ng/mL	trans-3-Methylfentanyl	0.050 ng/mL
U-49900	0.050 ng/mL		

Acode 52248B - Alcohols and Acetone Confirmation, Blood - Jugular Blood

-Analysis by Headspace Gas Chromatography (GC) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	5.0 mg/dL

Acode 52250U - Alcohols and Acetone Confirmation, Urine

-Analysis by Headspace Gas Chromatography (GC) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	5.0 mg/dL

Acode 52483B - Amphetamines Confirmation, Blood - Jugular Blood

-Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Amphetamine	5.0 ng/mL	MDEA	5.0 ng/mL
Ephedrine	5.0 ng/mL	MDMA	5.0 ng/mL
MDA	5.0 ng/mL	Methamphetamine	5.0 ng/mL



Analysis Summary and Reporting Limits:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Norpseudoephedrine	5.0 ng/mL	Phenylpropanolamine	20 ng/mL
Phentermine	5.0 ng/mL	Pseudoephedrine	5.0 ng/mL

Acode 90028B - Drugs of Abuse Panel with Vitreous Alcohol Confirmation, Blood (Forensic) (CSA) - KY - Jugular Blood

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Barbiturates	0.040 mcg/mL	Gabapentin	5.0 mcg/mL
Cannabinoids	10 ng/mL		

-Analysis by Headspace Gas Chromatography (GC) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	5.0 mg/dL

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
6-Monoacetylmorphine	2.0 ng/mL	MDA	10 ng/mL
7-Amino Clonazepam	10 ng/mL	MDEA	10 ng/mL
Acetyl Fentanyl	0.50 ng/mL	MDMA	10 ng/mL
Alpha-Hydroxyalprazolam	20 ng/mL	Meprobamate	1.0 mcg/mL
Alprazolam	10 ng/mL	Methadone	50 ng/mL
Amphetamine	10 ng/mL	Methamphetamine	10 ng/mL
Benzoylecgonine	100 ng/mL	Midazolam	5.0 ng/mL
Buprenorphine	1.0 ng/mL	Morphine	10 ng/mL
Carisoprodol	0.20 mcg/mL	Norbuprenorphine - Free	2.0 ng/mL
Chlordiazepoxide	50 ng/mL	Nordiazepam	20 ng/mL
Clonazepam	10 ng/mL	Norfentanyl	1.0 ng/mL
Cocaethylene	20 ng/mL	Norpropoxyphene	0.25 mcg/mL
Cocaine	20 ng/mL	Norpseudoephedrine	250 ng/mL
Codeine	10 ng/mL	O-Desmethyltramadol	25 ng/mL
Desalkylflurazepam	10 ng/mL	Oxazepam	20 ng/mL
Diazepam	25 ng/mL	Oxycodone	10 ng/mL
Dihydrocodeine / Hydrocodol	10 ng/mL	Oxymorphone	2.0 ng/mL
EDDP	50 ng/mL	Phencyclidine	5.0 ng/mL
Ephedrine	250 ng/mL	Phentermine	50 ng/mL
Estazolam	10 ng/mL	Phenylpropanolamine	250 ng/mL
Fentanyl	1.0 ng/mL	Propoxyphene	0.25 mcg/mL
Flurazepam	10 ng/mL	Pseudoephedrine	250 ng/mL
Hydrocodone	10 ng/mL	Temazepam	20 ng/mL
Hydromorphone	2.0 ng/mL	Tramadol	20 ng/mL
Hydroxytriazolam	5.0 ng/mL	Triazolam	5.0 ng/mL
Lorazepam	5.0 ng/mL		

Acode 90028U - Drugs of Abuse Panel, Urine (Forensic) (CSA) - KY

Analysis Summary and Reporting Limits:

-Analysis by Enzyme Immunoassay (EIA) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Barbiturates	0.30 mcg/mL	Cannabinoids	50 ng/mL

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Gabapentin	5.0 mcg/mL		

-Analysis by Headspace Gas Chromatography (GC) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	5.0 mg/dL

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
1-Hydroxymidazolam	100 ng/mL	Lorazepam	50 ng/mL
6-Monoacetylmorphine	20 ng/mL	MDA	100 ng/mL
7-Amino Clonazepam	100 ng/mL	MDEA	100 ng/mL
Acetyl Fentanyl	5.0 ng/mL	MDMA	100 ng/mL
Alpha-Hydroxylprazolam	200 ng/mL	Meprobamate	10 mcg/mL
Alprazolam	100 ng/mL	Methadone	500 ng/mL
Amphetamine	100 ng/mL	Methamphetamine	100 ng/mL
Benzoyllecgonine	1000 ng/mL	Morphine	100 ng/mL
Buprenorphine	10 ng/mL	Norbuprenorphine - Total	20 ng/mL
Carisoprodol	2.0 mcg/mL	Nordiazepam	200 ng/mL
Chlordiazepoxide	500 ng/mL	Norfentanyl	10 ng/mL
Cocaethylene	200 ng/mL	Norpropoxyphene	2.5 mcg/mL
Cocaine	200 ng/mL	Norpseudoephedrine	2500 ng/mL
Codeine	100 ng/mL	O-Desmethyltramadol	250 ng/mL
Desalkylflurazepam	100 ng/mL	Oxazepam	200 ng/mL
Diazepam	250 ng/mL	Oxycodone	100 ng/mL
Dihydrocodeine / Hydrocodol	100 ng/mL	Oxymorphone	20 ng/mL
EDDP	500 ng/mL	Phencyclidine	50 ng/mL
Ephedrine	2500 ng/mL	Phentermine	500 ng/mL
Estazolam	100 ng/mL	Phenylpropanolamine	2500 ng/mL
Fentanyl	10 ng/mL	Propoxyphene	2.5 mcg/mL
Hydrocodone	100 ng/mL	Pseudoephedrine	2500 ng/mL
Hydromorphone	20 ng/mL	Temazepam	200 ng/mL
Hydroxyethylflurazepam	100 ng/mL	Tramadol	200 ng/mL
Hydroxytriazolam	50 ng/mL		