



NMS Labs

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Toxicology Report

Report Issued 12/31/2022 00:03

To: 10386

Sangamon County Coroner's Office
 200 South 9th Street
 Rm 303
 Springfield, IL 62701

Patient Name MOORE, EARL L.
 Patient ID N-22-694
 Chain 22469757
 DOB 03/22/1987
 Sex Male
 Workorder 22469757

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Positive Findings:

Analyte	Result	Units	Matrix Source
Ethanol	77	mg/dL	001 - Blood
Blood Alcohol Concentration (BAC)	0.077	g/100 mL	001 - Blood
Cotinine	Presump Pos	ng/mL	001 - Blood
11-Hydroxy Delta-9 THC	1.8	ng/mL	001 - Blood
Delta-9 Carboxy THC	75	ng/mL	001 - Blood
Delta-9 THC	12	ng/mL	001 - Blood
Creatinine (Vitreous Fluid)	0.837	mg/dL	004 - Vitreous Fluid
Sodium (Vitreous Fluid)	143	mmol/L	004 - Vitreous Fluid
Potassium (Vitreous Fluid)	7.19	mmol/L	004 - Vitreous Fluid
Chloride (Vitreous Fluid)	121	mmol/L	004 - Vitreous Fluid
Glucose (Vitreous Fluid)	26.3	mg/dL	004 - Vitreous Fluid
Urea Nitrogen (Vitreous Fluid)	13.8	mg/dL	004 - Vitreous Fluid
Ethanol	107	mg/dL	004 - Vitreous Fluid

See Detailed Findings section for additional information

Testing Requested:

Test	Test Name
1919FL	Electrolytes and Glucose Panel (Vitreous), Fluid (Forensic)
8084B	Postmortem, Expanded w/ Vitreous Alcohol and 6-MAM Confirmation, Blood (Forensic)

Specimens Received:

ID	Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Labeled As
001	Gray Stopper Glass Tube	11.25 mL	12/18/2022	Blood	N-22-694
002	Gray Stopper Glass Tube	11 mL	12/18/2022	Blood	N-22-694
003	Gray Stopper Plastic Tube	5.75 mL	12/18/2022	Blood	N-22-694
004	Blue Cap Plastic Tube	3.5 mL	12/18/2022	Vitreous Fluid	N-22-694
005	Yellow Stopper Plastic Tube	6 mL	12/18/2022	Urine	N-22-694
006	Lavender (Purple) Stopper Plastic Tube	1 mL	12/18/2022	Bile Fluid	N-22-694
007	Lavender (Purple) Cap Plastic Container	45 mL	12/18/2022	Gastric Fluid	N-22-694

NMS v.24.0

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ID	Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Labeled As
008	Lavender (Purple) Cap Plastic Container	45.4 g	12/18/2022	Liver Tissue	N-22-694
001	ILIOFEMORAL V.				
002	ILIOFEMORAL V.				
003	ILIOFEMORAL V.				
007	BROWN; CHUNKY				

All sample volumes/weights are approximations.
 Specimens received on 12/20/2022.

Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Ethanol	77	mg/dL	10	001 - Blood	Headspace GC
Blood Alcohol Concentration (BAC)	0.077	g/100 mL	0.010	001 - Blood	Headspace GC
Cotinine	Presump Pos	ng/mL	200	001 - Blood	LC/TOF-MS
This test is an unconfirmed screen. Confirmation by a more definitive technique such as GC/MS is recommended.					
11-Hydroxy Delta-9 THC	1.8	ng/mL	1.0	001 - Blood	LC-MS/MS
Delta-9 Carboxy THC	75	ng/mL	5.0	001 - Blood	LC-MS/MS
Delta-9 THC	12	ng/mL	0.50	001 - Blood	LC-MS/MS
Ethanol	Confirmed	mg/dL	10	001 - Blood	Headspace GC
Creatinine (Vitreous Fluid)	0.837	mg/dL	0.500	004 - Vitreous Fluid	Chemistry Analyzer
Sodium (Vitreous Fluid)	143	mmol/L	50.0	004 - Vitreous Fluid	Chemistry Analyzer
Potassium (Vitreous Fluid)	7.19	mmol/L	1.00	004 - Vitreous Fluid	Chemistry Analyzer
Chloride (Vitreous Fluid)	121	mmol/L	50.0	004 - Vitreous Fluid	Chemistry Analyzer
Glucose (Vitreous Fluid)	26.3	mg/dL	10.0	004 - Vitreous Fluid	Chemistry Analyzer
Urea Nitrogen (Vitreous Fluid)	13.8	mg/dL	2.00	004 - Vitreous Fluid	Chemistry Analyzer
Ethanol	107	mg/dL	10	004 - Vitreous Fluid	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.

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Reference Comments:

1. 11-Hydroxy Delta-9 THC (Active Metabolite) - Blood:

11-hydroxy-THC is a psychoactive THC metabolite. 11-OH-THC was detectable in blood, with a 0.5 ng/mL cutoff, for 1.5 hours (range: 0.25-3.5) when cannabis was smoked by occasional users. 11-OH-THC may be present over 72 hours in chronic, frequent cannabis users.

In occasional cannabis users, median (range) peak blood concentrations after smoking of 6.9% (50 mg) THC were 1.9 (0.5-8.7) ng/mL with median times of maximum concentrations at approximately 11 minutes. In chronic, frequent cannabis users, median (range) peak blood concentrations after smoking 6.9% THC were 7.2 (1.9-30.9) ng/mL, with median times of maximum concentrations at approximately 12 minutes. Usual peak levels are less than 10% of THC levels after smoking.

2. Chloride (Vitreous Fluid) (Cl-) - Vitreous Fluid:

Normal: 105 - 135 mmol/L

3. Creatinine (Vitreous Fluid) - Vitreous Fluid:

Normal: 0.6 - 1.3 mg/dL

4. Delta-9 Carboxy THC (Inactive Metabolite) - Blood:

Delta-9 THC is the principle psychoactive ingredient of marijuana/hashish. Delta-9 carboxy THC (THCC) is the inactive metabolite of THC. The usual peak concentrations in serum for 1.75% or 3.55% THC marijuana cigarettes are 10-101 ng/mL attained 32 to 240 minutes after beginning smoking, with a slow decline thereafter. The ratio of whole blood concentration to plasma concentration is unknown for this analyte. THCC may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users. THCC is usually not detectable after passive inhalation.

5. Delta-9 THC (Active Ingredient of Marijuana) - Blood:

Delta-9 THC is the principle psychoactive ingredient of marijuana (cannabis, hashish). It is also the active component of the prescription medication Marinol®. Marijuana use causes relaxation, distorted perception, euphoria and feelings of well being, along with confusion, dizziness, somnolence, ataxia, speech difficulties, lethargy and muscular weakness.

After smoking a user-preferred 300 mcg/kg dose average plasma THC concentrations at 35 minutes were reported at 16.1 (range 4.7-30.9) ng/mL, and had declined to 1.5 (range 0.4-3.2) ng/mL after 190 minutes. Usual peak levels in serum for 1.75% or 3.55% THC marijuana cigarettes: 50-270 ng/mL at 6 to 9 minutes after beginning smoking, decreasing to less than 5 ng/mL by 2 hrs. Whole blood THC concentrations are typically half those in a corresponding plasma sample.

6. Ethanol (Ethyl Alcohol) - 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.

7. Ethanol (Ethyl Alcohol) - Vitreous Fluid:

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.

8. Glucose (Vitreous Fluid) (C6H12O6; D-glucose (biologically active); Dextrose; L-glucose) - Vitreous Fluid:

Normal: <200 mg/dL

Postmortem vitreous glucose concentrations >200 mg/dL are associated with hyperglycemia.

Since postmortem vitreous glucose concentrations decline rapidly after death both in vivo and in vitro, care should be taken in the interpretation of results. Stability of vitreous glucose for up to 30 days has been noted by NMS Labs when specimens are maintained frozen (-20C).

9. Potassium (Vitreous Fluid) (K+) - Vitreous Fluid:

Normal: <15 mmol/L

Quantitative results for Potassium will be affected if performed on gray top tubes since these collection tubes contain potassium oxalate.

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Reference Comments:

10. Sodium (Vitreous Fluid) (Na+) - Vitreous Fluid:

Normal: 135 - 150 mmol/L

Quantitative results for sodium will be affected if performed on gray top tubes since these collection tubes contain sodium fluoride.

11. Urea Nitrogen (Vitreous Fluid) (Carbamide; carbonyl diamide; carbonyldiamine) - Vitreous Fluid:

Normal: 8 - 20 mg/dL

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 22469757 was electronically signed on 12/30/2022 23:54 by:

Ayako Chan-Hosokawa, M.S., D-ABFT-FT
 Forensic Toxicologist

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.

Test 1919FL - Electrolytes and Glucose Panel (Vitreous), Fluid (Forensic) - Vitreous Fluid

-Analysis by Chemistry Analyzer for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Chloride (Vitreous Fluid)	50.0 mmol/L	Potassium (Vitreous Fluid)	1.00 mmol/L
Creatinine (Vitreous Fluid)	0.500 mg/dL	Sodium (Vitreous Fluid)	50.0 mmol/L
Glucose (Vitreous Fluid)	10.0 mg/dL	Urea Nitrogen (Vitreous Fluid)	2.00 mg/dL

Test 52198B - Cannabinoids Confirmation, Blood - Blood

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

Analyte	Rpt. Limit	Analyte	Rpt. Limit
11-Hydroxy Delta-9 THC	1.0 ng/mL	Delta-9 THC	0.50 ng/mL
Delta-9 Carboxy THC	5.0 ng/mL		

Test 52249B - Alcohols and Acetone Confirmation, Blood (CSA) - Blood

-Analysis by Headspace Gas Chromatography (GC) for:

Analyte	Rpt. Limit	Analyte	Rpt. Limit
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	10 mg/dL

Test 53249FL - Alcohols and Acetone Confirmation, Vitreous Fluid (Forensic) - Vitreous Fluid

-Analysis by Headspace Gas Chromatography (GC) for:

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Analysis Summary and Reporting Limits:

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

Test 8084B - Postmortem, Expanded w/ Vitreous Alcohol and 6-MAM Confirmation, Blood (Forensic) - Blood

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

<u>Analyte</u>	<u>Rpt. Limit</u>	<u>Analyte</u>	<u>Rpt. Limit</u>
Barbiturates	0.040 mcg/mL	Gabapentin	5.0 mcg/mL
Cannabinoids	10 ng/mL	Salicylates	120 mcg/mL

-Analysis by Headspace Gas Chromatography (GC) for:

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

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of analyte classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified analyte class are included. Some specific analytes outside of these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs. Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotics, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnotics, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.