## OFFICE OF THE MEDICAL EXAMINER
## WEST TENNESSEE REGIONAL FORENSIC CENTER

## REPORT OF INVESTIGATION BY COUNTY MEDICAL EXAMINER

Hardeman County Medical Examiner: Michael Revelle

Judicial District Number: 25

District Attorney: Honorable Mark E. Davidson

**State Number: 21-35-0033**

**Case Number: MEC2021-2743**

| Name of Decedent | Age | Race | Date of Birth | Sex |
|---|---|---|---|---|
| Ronnie Glissen | 35 Years | Other | 02/01/1986 | Male |

**Address**

Whiteville Correctional Facility, 1440 Union Springs Road, Memphis, TN 38075

| Date of Death | Type of Death | Investigating Agency/Complaint #: |
|---|---|---|
| 12/02/2021 4:50 PM | In Jail/Prison/In Police Custody | TN Department of Corrections |

**Place of Death**

1440 Union Springs Rd, Whiteville, 38075, TN

**Narrative Summary**

On 12/02/2021 at approximately 1752 hours this office was contacted by Tennessee department of Corrections Investigator Demario Avery to report the in-custody death of this 35 year old male, tentatively identified as Ronnie Glisson. The decedent was reportedly found unresponsive at the Whiteville Correctional Facility where he had been incarcerated since 3/24/2010. 911 Emergency Services were contacted with Hardeman County EMS responding. The decedent was transported to Bolivar General Hospital where asystole was confirmed at 1650 by Dr. Maria Burns. The decedent is reported to have a history of illicit drug use and has no known medical history. Due to the in-custody death and suspected overdose, jurisdiction for the death was accepted by the Medical Examiner's Office. The decedent was transported to the West Tennessee Regional Forensic Center for further examination, positive identification and final disposition.Deana Sanford, Investigator12/02/2021

| Jurisdiction Accepted | Autopsy Ordered | Toxicology Ordered |
|---|---|---|
| Yes | Yes | Yes |

**Physician Responsible for Death Certificate**

Katrina Van Pelt, D.O.

| Cremation Approved | Funeral Home |
|---|---|
| No | Hennessey Funeral Home & Crematory |

**Cause of Death**

Acute fentanyl and methamphetamine intoxication

**Contributory Cause of Death**

**Manner of Death**

Accident

West Tennessee Regional Forensic Center
Office of the Medical Examiner
637 Poplar Avenue
Memphis, Tennessee 38105-4510
Telephone (901) 222-4600 Fax (901) 222-4645

# REPORT OF AUTOPSY EXAMINATION

**CASE NUMBER**: 2021-2743 **DECEDENT**: Ronnie Glissen

**AGE**: 35 years **RACE**: White **SEX**: Male

**Authorized by:** Michael Revelle, MD **Received from**: Hardeman County

**Date of Autopsy Examination**: 12/6/2021 **Time**: 10 AM

**Body Identified by**: Fingerprints

**Persons present at autopsy:** Indica Hart

## PATHOLOGICAL DIAGNOSES

I. Acute fentanyl and methamphetamine intoxication
   A. Pulmonary edema, right lung 696 grams and left lung 604 grams
II. Cholelithiasis

**CAUSE OF DEATH**: Acute fentanyl and methamphetamine intoxication

The facts stated herein are correct to the best of my knowledge and belief.

***Electronically signed by Katrina Van Pelt, D.O. on Monday, January 24, 2022****

Katrina Van Pelt, D.O., Forensic Pathologist Date

**EVIDENCE OF INJURY:** None.

## EXTERNAL EXAMINATION

GENERAL
The body is that of a well-developed, well-nourished, 66 inch, 167 pound male who appears the reported age of 35 years. The body is refrigerated, well preserved, and not embalmed. Rigor mortis is full in the jaw, neck and extremities. Livor mortis is pink, posterior and fixed. The scalp has black hair in a normal distribution. Facial hair consists of black mustache and goatee. The irides are brown. The corneas are clear. The sclerae are white. The congested conjunctivae have no petechiae. The external auditory canals are unremarkable. The nasal septum and nasal bones are intact. The mouth is partially edentulous. The oral mucosa is not injured. The frenula are not lacerated. The neck and chest are symmetrical. Two orange abrasions measuring up to 1 inch are on the right side of the chest. The abdomen is unremarkable. The back is symmetrical. There are three red linear abrasions on the left side of the back. The external genitalia are those of a fully developed adult male. The anus is unremarkable. A red linear abrasion is on the right buttock. Multiple red linear abrasions are on the posterior aspect of the right thigh. A red abrasion is on the posterior aspect of the right knee. Multiple red linear abrasions are on the anterior aspect of the left knee. A 1 inch red abrasion is on the anterior aspect of the right thigh. Linear line of red abrasions are on the anterior aspect of the right thigh. The extremities have no deformities. The arms have no track marks. The wrists have no scars. The fingernails are intact.

TATTOOS AND SCARS:
As photographed and diagrammed.

MEDICAL INTERVENTION
Endotracheal tube with bag extends from the mouth. Automated external defibrillator pads are attached to the skin. Intravenous access is in the left antecubital fossa. Bilateral rib fractures are present and are consistent with resuscitative efforts.

CLOTHING AND PERSONAL EFFECTS
The body is received clad in two white socks, blue jeans, black belt, blue shirt, gray underwear, gray shirt, and white undershirt. Personal effects include white metal ring, yellow metal ring, wooded bead necklace with wood cross, and clear pipe straw.

X-RAYS:
None.

## INTERNAL EXAMINATION

BODY CAVITIES

The body is opened by a standard Y-shaped thoracoabdominal incision. The ribs, sternum, and clavicles are intact. The diaphragm is not elevated. The mesothelial surfaces are smooth and glistening. All body organs are in their normal anatomical position. The right and left pleural cavities have no excess fluid or adhesions. The pericardial sac has no excess fluid. The peritoneal cavity has no excess fluid or adhesions.

NECK

The soft tissues of the neck, including strap muscles and large vessels, are unremarkable. The tongue is unremarkable. The hyoid bone, thyroid cartilage, and larynx are intact.

CARDIOVASCULAR SYSTEM

Heart weight: 404 grams.

The epicardium is smooth, glistening, and intact. The vena cavae and pulmonary arteries are without thrombus or embolus. The coronary arteries arise normally and follow the usual courses with no evidence of atherosclerotic stenosis. The chambers and valves exhibit the usual positional relationships and structure. The valves show no evidence of vegetation or thickening. The tricuspid, pulmonic, mitral, and aortic valve circumferences are 12 cm, 8 cm, 11 cm, and 7 cm, respectively. The endocardium is thin and glistening. The atrial and ventricular septa are intact. The papillary muscles and chordae are unremarkable. The myocardium is red-brown and shows no areas of fibrosis, hyperemia or mottling. The right, left, and septal ventricular walls are 0.3 cm, 1.2 cm, and 1 cm thick, respectively. The aorta is smooth and shiny with intimal fatty streaking and no atherosclerosis.

PULMONARY SYSTEM

Right lung weight: 696 grams.

Left lung weight: 604 grams.

The upper airway is clear of debris and foreign material. The mucosal surfaces are smooth, pink-gray, and unremarkable. The trachea and mainstem bronchi are clear of debris and foreign material. The pleural surfaces are glistening and smooth. The parenchyma is red-purple with no areas of consolidation or focal lesions.

LIVER AND PANCREAS

Liver weight: 1658 grams.

The smooth, glistening, intact capsule covers dark brown parenchyma with a preserved lobular pattern. The liver has no focal lesions. The extra and intrahepatic vessels are patent. The gallbladder contains yellow-green mucoid bile and no calculi. The gallbladder's mucosa is green and velvety. The pink-tan pancreas has an intact lobular architecture and patent duct.

ENDOCRINE SYSTEM:
The adrenal glands are unremarkable. The tan-brown thyroid gland has a normal size and shape and unremarkable parenchyma.

HEMATOPOIETIC SYSTEM
Spleen weight: 228 grams.
The spleen has an intact capsule covering red-purple, soft parenchyma. The bone marrow of the ribs is soft and dark red. Regional lymph nodes have their usual distribution and appearance.

GASTROINTESTINAL TRACT
The esophagus is lined by gray-white smooth mucosa and is not dilated or stenosed and has no varices. The stomach has a normal size and shape. The gastric mucosa is free of ulcerations and is arranged with the usual folds. The stomach contains approximately 150 milliliters of green-brown viscous liquid. The small intestine is normal in length, configuration, and diameter and has a smooth, shiny serosal surface. The mesentery has a normal insertion. The large intestine has a smooth, shiny serosal surface and no palpable masses or obstructions. The appendix is unremarkable.

URINARY SYSTEM
Right kidney weight: 156 grams.
Left kidney weight: 132 grams.
The renal capsules are smooth, thin, semi-transparent, and cover smooth, red-brown cortical surfaces. Serial sections of the kidneys show cortices of normal thickness, slightly congested, and with well delineated corticomedullary junctions. The renal vessels are patent. The ureters have a normal course and caliber. The bladder contains urine. The mucosa is tan, mildly trabeculated, and intact.

REPRODUCTIVE SYSTEM
The prostate gland is unremarkable. The two intrascrotal testes have homogenous tan parenchyma with no masses or ecchymoses.

MUSCULOSKELETAL SYSTEM
The musculoskeletal system is well developed. The muscles of the anterior neck, chest wall, abdomen, and iliopsoas are symmetrical, firm, and red-brown. The pelvic bones and vertebral bodies of the cervical, thoracic, and lumbar spine are unremarkable.

HEAD AND CENTRAL NERVOUS SYSTEM
Brain weight: 1344 grams.
The scalp has no hematomas. The calvarium and skull base have no fractures. The dura mater and falx cerebri are intact. The leptomeninges are thin and delicate. There is no evidence of epidural, subdural, or subarachnoid hemorrhage. The cerebral hemispheres are symmetrical. The gyri and sulci show no evidence of shrinkage or widening respectively. The vessels at the base of the brain are intact with no evidence of aneurysms or significant atherosclerosis. Serial sections of the brain show no evidence of intraparenchymal hemorrhage. The gray-white matter border is distinct. The

deep white matter has no softening or masses. The ventricular system is not dilated or compressed. Serial sections of the cerebellum show unremarkable cerebellar folia, deep white matter, and dentate nucleus. Sectioning of the brainstem shows appropriately pigmented for age substantia nigra, and unremarkable medulla and pontine white matter. The pituitary gland is unremarkable. The atlanto-occipital ligaments and cervical spine are intact. The spinal cord is not examined.

## DISPOSITION OF EVIDENCE

| | |
|---|---|
| FTA Card, serum | WTRFC |
| None | FUNERAL HOME |
| Heart blood ×1, iliac blood ×1, vitreous x1, urine x1, liver x1 | NMS TOXICOLOGY LAB |
| Clothing and personal effects | EVIDENCE |

## MICROSCOPIC DESCRIPTION

None.

## SUMMARY AND INTERPRETATION

The decedent was a 35 year old male who was reportedly found unresponsive at the Whiteville Correctional Facility. He was transported to Bolivar General Hospital where death was pronounced.

Autopsy findings include pulmonary edema, cholelithiasis and bilateral rib fractures.

Toxicological studies performed on postmortem iliac blood detected fentanyl, norfentanyl (metabolite of fentanyl), 4-ANPP (precursor chemical used in the production of fentanyl), methamphetamine, amphetamine, caffeine, naloxone, and delta-9 THC.

Death was caused by acute fentanyl and methamphetamine intoxication. Reports of the death scene investigation, circumstances surrounding and leading up to the death, toxicology and autopsy findings indicate the manner of death to be accident.

KVP

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

**CONFIDENTIAL**

# Toxicology Report

**Report Issued** 01/19/2022 12:05

**To:** **10505**
University of Tennessee Forensic Center
Attn: Marco Ross
637 Poplar Avenue
Memphis, TN 38105

**Patient Name** GLISSON, RONNIE
**Patient ID** 2021-2743
**Chain** NMSCP151601
**Age** 35 Y **DOB** 02/01/1986
**Gender** Male
**Workorder** 21431157



## Positive Findings:

| Compound | Result | Units | Matrix Source |
|---|---|---|---|
| **4-ANPP** | **Positive** | **ng/mL** | **001 - Iliac Blood** |
| **Caffeine** | **Positive** | **mcg/mL** | **001 - Iliac Blood** |
| **Naloxone** | **Positive** | **ng/mL** | **001 - Iliac Blood** |
| **Delta-9 THC** | **0.61** | **ng/mL** | **001 - Iliac Blood** |
| **Amphetamine** | **73** | **ng/mL** | **001 - Iliac Blood** |
| **Methamphetamine** | **610** | **ng/mL** | **001 - Iliac Blood** |
| **Fentanyl** | **13** | **ng/mL** | **001 - Iliac Blood** |
| **Norfentanyl** | **1.0** | **ng/mL** | **001 - Iliac Blood** |

See Detailed Findings section for additional information

## Testing Requested:

| Analysis Code | Description |
|---|---|
| 8042B | Postmortem, Expanded w/Vitreous Alcohol Confirmation, Blood (Forensic) |

## Specimens Received:

| ID | Tube/Container | Volume/ Mass | Collection Date/Time | Matrix Source | Labeled As |
|---|---|---|---|---|---|
| 001 | Gray Top Tube | 11.5 mL | 12/06/2021 | Iliac Blood | 2021-2743 |
| 002 | Gray Top Tube | 9.25 mL | 12/06/2021 | Heart Blood | 2021-2743 |
| 003 | Red Top Tube | 4 mL | 12/06/2021 | Vitreous Fluid | 2021-2743 |
| 004 | White Plastic Container | 35 mL | 12/06/2021 | Urine | 2021-2743 |
| 005 | White Plastic Container | 43.5 g | 12/06/2021 | Liver Tissue | 2021-2743 |

All sample volumes/weights are approximations.

Specimens received on 12/09/2021.

## Detailed Findings:

| Analysis and Comments | Result | Units | Rpt. Limit | Specimen Source | Analysis By |
|---|---|---|---|---|---|
| 4-ANPP | Positive | ng/mL | 0.10 | 001 - Iliac Blood | LC/TOF-MS |
| Caffeine | Positive | mcg/mL | 0.20 | 001 - Iliac Blood | LC/TOF-MS |
| Naloxone | Positive | ng/mL | 1.0 | 001 - Iliac Blood | LC/TOF-MS |
| Delta-9 THC | 0.61 | ng/mL | 0.50 | 001 - Iliac Blood | LC-MS/MS |
| Amphetamine | 73 | ng/mL | 5.0 | 001 - Iliac Blood | LC-MS/MS |
| Methamphetamine | 610 | ng/mL | 5.0 | 001 - Iliac Blood | LC-MS/MS |
| Fentanyl | 13 | ng/mL | 0.20 | 001 - Iliac Blood | LC-MS/MS |
| Norfentanyl | 1.0 | ng/mL | 0.40 | 001 - Iliac Blood | LC-MS/MS |

**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:

1. 4-ANPP (Despropionyl fentanyl) - Iliac Blood:

   4-ANPP (despropionylfentanyl) is a precursor chemical used in the production of fentanyl/fentanyl related compounds and is also a fentanyl metabolite and may be a metabolite of other fentanyl-related compounds. It is considered to be pharmacologically weak.
   The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

2. Amphetamine - Iliac 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.

3. Caffeine (No-Doz®) - Iliac Blood:

   Caffeine is a xanthine-derived central nervous system stimulant. It also produces diuresis and cardiac and respiratory stimulation. It can be readily found in such items as coffee, tea, soft drinks and chocolate. As a reference, a typical cup of coffee or tea contains between 40 to 100 mg caffeine.

   The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

## Reference Comments:

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

   Marijuana is a DEA Schedule I hallucinogen. Pharmacologically, it has depressant and reality distorting effects. Collectively, the chemical compounds that comprise marijuana are known as Cannabinoids.

   Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. It rapidly leaves the blood, even during smoking, falling to below detectable levels within several hours. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC and 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.
   THC concentrations in blood are usually about one-half of serum/plasma concentrations. 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.

5. Fentanyl (Duragesic®; Sublimaze®) - Iliac Blood:

   Fentanyl is a DEA Schedule II synthetic morphine substitute anesthetic/analgesic. It is reported to be 80 to 200 times as potent as morphine and has a rapid onset of action as well as addictive properties.

   It is reported that patients lost consciousness at mean plasma levels of fentanyl of 34 ng/mL when infused with 75 mcg/Kg over a 15 min period; peak plasma levels averaged 50 ng/mL.

   After application of a fentanyl transdermal preparation (patch), serum fentanyl concentrations are reported to be in the following ranges within 24 hours:
   25 mcg/hour patch: 0.3 - 1.2 ng/mL
   50 mcg/hour patch: 0.6 - 1.8 ng/mL
   75 mcg/hour patch: 1.1 - 2.6 ng/mL
   100 mcg/hour patch: 1.9 - 3.8 ng/mL

   Following removal of the patch, serum fentanyl concentrations are reported to decrease with a mean elimination half-life of 17 hours (range, 13 to 22 hours).

   The mean peak plasma serum fentanyl concentration in adults given an 800 mcg oral transmucosal fentanyl preparation over 15 minutes is reported at 2.1 ng/mL (range, 1.4 - 3.0 ng/mL) at approximately 0.4 hours.

   Signs associated with fentanyl toxicity include severe respiratory depression, seizures, hypotension, coma and death. In fatalities from fentanyl, blood concentrations are variable and have been reported as low as 3 ng/mL.

   Substance(s) known to interfere with the identity and/or quantity of the reported result: 4-methylphenethyl acetyl fentanyl

6. Methamphetamine - Iliac Blood:

   d-Methamphetamine is a DEA schedule II stimulant drug capable of causing hallucinations, aggressive behavior and irrational reactions. Chemically, there are two forms (isomers) of methamphetamine: l- and d-methamphetamine. The l-isomer is used in non-prescription inhalers as a decongestant and has weak CNS-stimulatory activity. The d-isomer has been used therapeutically as an anorexigenic agent in the treatment of obesity and has potent CNS-, cardiac- and circulatory-stimulatory activity. Amphetamine and norephedrine (phenylpropanolamine) are metabolites of methamphetamine. d-Methamphetamine is an abused substance because of its stimulatory effects and is also addictive.

   A peak blood concentration of methamphetamine of 20 ng/mL was reported at 2.5 hr after an oral dosage of 12.5 mg. Blood levels of 200 - 600 ng/mL have been reported in methamphetamine abusers who exhibited violent and irrational behavior. High doses of methamphetamine can also elicit restlessness, confusion, hallucinations, circulatory collapse and convulsions.

   *In this case, the level of methamphetamine determined has not been differentiated according to its isomeric forms. Differentiation of the isomers of methamphetamine is available upon request.

## Reference Comments:

7. Naloxone (Narcan®) - Iliac Blood:

   Naloxone is a narcotic antagonist used to counter the central nervous system depression effects of opioids, including respiratory depression. It is also used for the diagnosis of suspected acute opioid overdosage. Naloxone is available as a 0.4 mg/mL solution of the hydrochloride for parenteral injection.

   Naloxone is also available in combination with buprenorphine (Suboxone®) for the treatment of opioid dependence. This combination is available in tablets of 2 mg buprenorphine with 0.5 mg naloxone or 8 mg buprenorphine with 2 mg of naloxone for sublingual administration.

   The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

8. Norfentanyl (Fentanyl Metabolite) - Iliac Blood:

   Norfentanyl is the primary inactive metabolite of the synthetic narcotic analgesic fentanyl.

## Sample Comments:

001 Physician/Pathologist Name: Dr. Katrina Van Pelt

001 County: Hardeman

001 Autopsy ID: 2021-2173

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 21431157 was electronically signed on 01/19/2022 11:40 by:

Brianna Peterson

Brianna L. Peterson, Ph.D., F-ABFT
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.

Acode 52198B - Cannabinoids Confirmation, Blood - Iliac Blood

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

| Compound | Rpt. Limit | Compound | 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 | | |

Acode 52483B - Amphetamines Confirmation, Blood - Iliac Blood

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

| Compound | Rpt. Limit | Compound | Rpt. Limit |
|---|---|---|---|
| Amphetamine | 5.0 ng/mL | MDMA | 5.0 ng/mL |
| Ephedrine | 5.0 ng/mL | Methamphetamine | 5.0 ng/mL |
| MDA | 5.0 ng/mL | Norpseudoephedrine | 5.0 ng/mL |
| MDEA | 5.0 ng/mL | Phentermine | 5.0 ng/mL |

## Analysis Summary and Reporting Limits:

| Compound | Rpt. Limit | Compound | Rpt. Limit |
|---|---|---|---|
| Phenylpropanolamine | 20 ng/mL | Pseudoephedrine | 5.0 ng/mL |

Acode 52484B - Fentanyl and Acetyl Fentanyl Confirmation, Blood - Iliac Blood

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

| Compound | Rpt. Limit | Compound | Rpt. Limit |
|---|---|---|---|
| Acetyl Fentanyl | 0.20 ng/mL | Norfentanyl | 0.40 ng/mL |
| Fentanyl | 0.20 ng/mL | | |

Acode 8042B - Postmortem, Expanded w/Vitreous Alcohol Confirmation, Blood (Forensic) - Iliac Blood

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

| Compound | Rpt. Limit | Compound | Rpt. Limit |
|---|---|---|---|
| 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:

| Compound | Rpt. Limit | Compound | Rpt. Limit |
|---|---|---|---|
| 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: 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 included in this screen, please contact NMS Labs. Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotic Agents, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnosedatives, Hypoglycemics, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.