



**NMS Labs**

**CONFIDENTIAL**

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**Demo Report**

Report Issued 04/27/2020 08:53

**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS  
**Chain** 20000431  
**Age Not Given** **DOB** Not Given  
**Gender** Not Given  
**Workorder** 20000431

To: **88888**  
Forensic Example Report  
Attn: Example Reports  
200 Welsh Road  
Horsham, PA 19044

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**Positive Findings:**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>Matrix Source</u>
Ethanol	85	mg/dL	001 - Blood
Blood Alcohol Concentration (BAC)	0.085	g/100 mL	001 - Blood
Delta-9 THC	50	ng/mL	001 - Blood
Bromazepam	50	ng/mL	001 - Blood
Clonazepam	50	ng/mL	001 - Blood
Flubromazepam	50	ng/mL	001 - Blood
Etizolam	50	ng/mL	001 - Blood
Flubromazolam	50	ng/mL	001 - Blood
Delorazepam	50	ng/mL	001 - Blood
Phenazepam	50	ng/mL	001 - Blood
Diclazepam	50	ng/mL	001 - Blood
Pyrazolam	50	ng/mL	001 - Blood
Meclonazepam	50	ng/mL	001 - Blood
Deschloroetizolam	50	ng/mL	001 - Blood

See Detailed Findings section for additional information

**Testing Requested:**

<u>Analysis Code</u>	<u>Description</u>
8054B	Postmortem, Expanded with NPS, Blood (Forensic)

**Specimens Received:**

<u>ID</u>	<u>Tube/Container</u>	<u>Volume/ Mass</u>	<u>Collection Date/Time</u>	<u>Matrix Source</u>	<u>Miscellaneous Information</u>
001	Clear vial	Not Given	Not Given	Blood	

All sample volumes/weights are approximations.  
Specimens received on 03/13/2020.

**Detailed Findings:**

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Ethanol	85	mg/dL	10	001 - Blood	Headspace GC
Blood Alcohol Concentration (BAC)	0.085	g/100 mL	0.010	001 - Blood	Headspace GC
Delta-9 THC	50	ng/mL	0.50	001 - Blood	LC-MS/MS
Ethanol	Confirmed	mg/dL	10	001 - Blood	Headspace GC
Bromazepam	50	ng/mL	5.0	001 - Blood	LC-MS/MS
Clonazolam	50	ng/mL	5.0	001 - Blood	LC-MS/MS
Flubromazepam	50	ng/mL	20	001 - Blood	LC-MS/MS
Etizolam	50	ng/mL	2.0	001 - Blood	LC-MS/MS
Flubromazolam	50	ng/mL	2.0	001 - Blood	LC-MS/MS
Delorazepam	50	ng/mL	5.0	001 - Blood	LC-MS/MS
Phenazepam	50	ng/mL	20	001 - Blood	LC-MS/MS
Diclazepam	50	ng/mL	5.0	001 - Blood	LC-MS/MS
Pyrazolam	50	ng/mL	5.0	001 - Blood	LC-MS/MS
Meclonazepam	50	ng/mL	5.0	001 - Blood	LC-MS/MS
Deschloroetizolam	50	ng/mL	2.0	001 - 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:**

- Bromazepam - Blood:

Bromazepam is a benzodiazepine drug that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not approved for use in the United States, but is available in some other countries. Bromazepam has been confirmed in 41 blood samples in a 34 month period; the average and median concentrations of 225 +/- 241 and 150 ng/mL, (5.7-950 ng/mL).
- Clonazolam - Blood:

Clonazolam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country. Clonazolam has been confirmed in 26 blood samples in a 34 month period; the average and median concentrations of 55.5 +/- 209 and 9.4 ng/mL, (5.2-1100 ng/mL).
- Delorazepam (Chlordesmethyldiazepam; Cloxazolam metabolite) - Blood:

Delorazepam is a benzodiazepine drug that is used as a novel psychoactive substance and a metabolite of diclazepam, another novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not approved for use in the United States, but is available in some other countries. In addition, the pharmaceutical benzodiazepine Cloxazolam is rapidly metabolized to delorazepam. Delorazepam has been confirmed in 121 blood samples in a 34 month period; the average and median concentrations of 81.3 +/- 117 and 15 ng/mL, (5-820 ng/mL).

**Reference Comments:**

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

Deschloroetizolam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country.

6. Diclazepam - Blood:

Diclazepam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country. Diclazepam has been confirmed in 60 blood samples in a 34 month period; the average and median concentrations of 33.7 +/- 57.2 and 19 ng/mL, (5.3-430 ng/mL).

Diclazepam is metabolized to the active compounds delorazepam (chlordesmethyldiazepam), lormetazepam and lorazepam.

7. 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. 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.

8. Etizolam - Blood:

Etizolam is a benzodiazepine drug that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not approved for use in the United States, but is available in some other countries. Etizolam has been confirmed in 496 blood samples in a 34 month period; the average and median concentrations of 74.9 +/- 223 and 28 ng/mL, (2.1-4100 ng/mL).

9. Flubromazepam - Blood:

Flubromazepam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country. Flubromazepam has been confirmed in 33 blood samples in a 34 month period; the average and median concentrations of 717 +/- 1401 and 300 ng/mL, (20-7900 ng/mL).

10. Flubromazolam - Blood:

Flubromazolam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country. Flubromazolam has been confirmed in 159 blood samples in a 34 month period; the average and median concentrations of 28.7 +/- 48.9 and 14 ng/mL, (2.0-450 ng/mL).

11. Meclonazepam - Blood:

Meclonazepam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country. Substance(s) known to interfere with the identity and/or quantity of the reported result: Oxazepam.

**Reference Comments:**

12. Phenazepam - Blood:

Phenazepam is a benzodiazepine drug that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not approved for use in the United States, but is available in some other countries.

Average peak plasma concentrations following a single 3 mg and 5 mg dose were reported to be 24 ng/mL and 38 ng/mL at 4 hours after dosing, respectively. Blood phenazepam concentration in individuals suspected of impaired driving were 18 - 3200 ng/mL. The reported half-life is 60 hours.

A post-mortem blood concentration of 380 ng/mL was reported in a case which also included morphine and codeine at 110 and 85 ng/mL, respectively.

The blood to serum/plasma ratio is not known.

Substance(s) known to interfere with the identity and/or quantity of the reported result: Nordiazepam.

13. Pyrazolam - Blood:

Pyrazolam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have CNS depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country.

The peak serum concentration following a single 1 mg oral dose was reported to be approximately 50 ng/mL at 3 hours. Pyrazolam has been detected in serum for up to 50 hours after use. The reported half-life is 17 hours.

The blood to serum/plasma ratio is not known.

Substance(s) known to interfere with the identity and/or quantity of the reported result: Oxazepam.

**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

-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>
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 52250B - Alcohols and Acetone Confirmation, 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 52502B - Designer Benzodiazepines Confirmation 1, 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>
Bromazepam	5.0 ng/mL	Etizolam	2.0 ng/mL
Clonazolam	5.0 ng/mL	Flubromazepam	20 ng/mL
Delorazepam	5.0 ng/mL	Flubromazolam	2.0 ng/mL
Diclazepam	5.0 ng/mL	Phenazepam	20 ng/mL



**Analysis Summary and Reporting Limits:**

Acode 52503B - Designer Benzodiazepines Confirmation 2, 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>
Deschloroetizolam	2.0 ng/mL	Pyrazolam	5.0 ng/mL
Meclonazepam	5.0 ng/mL		

Acode 8054B - Postmortem, Expanded with NPS, Blood (Forensic)

-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	Salicylates	120 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/Tandem Mass Spectrometry QTRAP (LC-MS/MS QTRAP) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
4-cyano-CUMYL-BINACA	0.10 ng/mL	AMB-FUBINACA	1.0 ng/mL
4-fluoro-MDMB-BINACA	0.10 ng/mL	CUMYL-THPINACA	0.10 ng/mL
5-fluoro-EDMB-PINACA	0.10 ng/mL	MDMB-CHMCZCA	0.10 ng/mL
5-fluoro-MDMB-PICA	0.10 ng/mL	MDMB-CHMICA	0.10 ng/mL
5-fluoro-MDMB-PINACA / 5-fluoro-EMB-PINACA	0.20 ng/mL	MDMB-CHMINAC	0.10 ng/mL
5-fluoro-MMB-PINACA	0.050 ng/mL	MDMB-FUBICA	0.10 ng/mL
5-fluoro-NA-PIC	0.10 ng/mL	MDMB-FUBINACA / EMB-FUBINACA	0.10 ng/mL
5-fluoro-QU-PINAC	0.10 ng/mL	MMB-CHMICA	0.10 ng/mL
ADAMANTYL-FUBINACA	0.20 ng/mL	MMB-CHMINACA	0.20 ng/mL
ADMB-CHMINACA	0.10 ng/mL	MMB-FUBICA	1.0 ng/mL
ADMB-FUBICA	1.0 ng/mL	MMB-FUBINACA	0.10 ng/mL
ADMB-FUBINACA	1.0 ng/mL	NA-FUBIC	1.0 ng/mL
AMB-CHMINACA	1.0 ng/mL	NA-FUBIM	0.20 ng/mL

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of compound classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified compound class are included. Some specific analytes outside these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs.

Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotic Agents, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnotics, Hypoglycemics, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.