



NMS Labs

CONFIDENTIAL

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Toxicology Report

Report Issued 02/28/2023 14:18

Patient Name Immel, Rickey D
Patient ID 230216-29
Chain 230216-29
DOB 11/01/1968
Sex Male
Workorder 23063095

To: **146676**
Pima County Office of the Medical Examiner
2825 E. District Street

Tucson, AZ 85714

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Positive Findings:

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Matrix Source</u>
Ethanol	312	mg/dL	001 - Iliac Blood
Blood Alcohol Concentration (BAC)	0.312	g/100 mL	001 - Iliac Blood
Chlordiazepoxide	33	ng/mL	001 - Iliac Blood
Ethanol	359	mg/dL	003 - Vitreous Fluid

See Detailed Findings section for additional information

Agency Case Number: 23-0631

Testing Requested:

<u>Test</u>	<u>Test Name</u>
8083B	Postmortem, Basic w/ Vitreous Alcohol and 6-MAM Confirmation, 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>Labeled As</u>
001	Clear Top PT with Preservative	7.5 mL	02/16/2023 08:40	Iliac Blood	23-0631
002	Clear Top PT with Preservative	8 mL	02/16/2023 08:40	Iliac Blood	23-0631
003	Blue Cap Plastic Tube	3 mL	02/16/2023 08:40	Vitreous Fluid	23-0631
004	Teal Cap Plastic Container	25 mL	02/16/2023 08:40	Urine	23-0631

All sample volumes/weights are approximations.

Specimens received on 02/17/2023.



Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Ethanol	312	mg/dL	10	001 - Iliac Blood	Headspace GC
Blood Alcohol Concentration (BAC)	0.312	g/100 mL	0.010	001 - Iliac Blood	Headspace GC
Chlordiazepoxide	33	ng/mL	20	001 - Iliac Blood	LC-MS/MS
Ethanol	Confirmed	mg/dL	10	001 - Iliac Blood	Headspace GC
Ethanol	359	mg/dL	10	003 - 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.

Reference Comments:

- Chlordiazepoxide (Librium®) - Iliac Blood:

Chlordiazepoxide is a benzodiazepine used for the management of anxiety and for aid in alcohol withdrawal. The analyte is extensively metabolized to at least 4 active metabolites: Norchlordiazepoxide, demoxepam, nordiazepam and oxazepam. With chronic therapy, nordiazepam may accumulate in the plasma of these individuals. It is available for use by the oral, IV and IM routes. Dosage should be individualized with the smallest effective dose used. For mild to moderate anxiety, a usual adult oral dosage is 5 to 10 mg given 3 to 4 times a day.

After a single 30 mg oral dose, a peak plasma level of 1600 ng/mL was reported at 4 hr. With chronic therapy of 55 mg chlordiazepoxide daily, chlordiazepoxide, norchlordiazepoxide and demoxepam concentrations were reported as averaging 2200 ng/mL, 1400 ng/mL and 670 ng/mL, respectively; nordiazepam values with similar treatment were found to have a steady-state value of 300 ng/mL.

Overdose with chlordiazepoxide can produce sedation, dizziness, hypotension, respiratory depression and bradycardia. In a reported fatality due to chlordiazepoxide, the blood concentration was 26000 ng/mL.

- Ethanol (Ethyl Alcohol) - Iliac 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.

- 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.

Sample Comments:

001 Physician/Pathologist Name: David Winston

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 23063095 was electronically signed on 02/28/2023 12:30 by:

Chelsey N. Deisher, 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 50012B - Benzodiazepines Confirmation, Blood - Iliac Blood

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

<u>Analyte</u>	<u>Rpt. Limit</u>	<u>Analyte</u>	<u>Rpt. Limit</u>
7-Amino Clonazepam	5.0 ng/mL	Flurazepam	2.0 ng/mL
Alpha-Hydroxyalprazolam	5.0 ng/mL	Hydroxyethylflurazepam	5.0 ng/mL
Alprazolam	5.0 ng/mL	Hydroxytriazolam	5.0 ng/mL
Chlordiazepoxide	20 ng/mL	Lorazepam	5.0 ng/mL
Clobazam	20 ng/mL	Midazolam	5.0 ng/mL
Clonazepam	2.0 ng/mL	Nordiazepam	20 ng/mL
Desalkylflurazepam	5.0 ng/mL	Oxazepam	20 ng/mL
Diazepam	20 ng/mL	Temazepam	20 ng/mL
Estazolam	5.0 ng/mL	Triazolam	2.0 ng/mL

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

-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

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

-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

Test 8083B - Postmortem, Basic w/ Vitreous Alcohol and 6-MAM Confirmation, Blood (Forensic) - Iliac Blood

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

<u>Analyte</u>	<u>Rpt. Limit</u>	<u>Analyte</u>	<u>Rpt. Limit</u>
Amphetamines	20 ng/mL	Fentanyl / Acetyl Fentanyl	1.0 ng/mL
Barbiturates	0.040 mcg/mL	Methadone / Metabolite	25 ng/mL
Benzodiazepines	100 ng/mL	Methamphetamine / MDMA	20 ng/mL
Buprenorphine / Metabolite	0.50 ng/mL	Opiates	20 ng/mL
Cannabinoids	10 ng/mL	Oxycodone / Oxymorphone	10 ng/mL
Cocaine / Metabolites	20 ng/mL	Phencyclidine	10 ng/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