

# Riverside County Sheriff - Coroner Division

## Coroner Investigation



MODE **Natural**

CASE # **201206755**

STATUS **Post**

DEPUTY **Wendy Spykstra**

### CASE INFO

REPORTED BY <b>Tet Arugay RN</b>		AGENCY <b>Inland Valley Medical Center</b>		DATE <b>08-09-12</b>	TIME <b>2052</b>
NEWS RELEASE	NAME RELEASABLE	ROLL-OUT?	# OF PHOTOS	MEDIUM	SPECIAL CIRCUMSTANCES
		<b>No</b>			

### DECEDENT INFO

1 NAME (FIRST) <b>Fatima</b>		2 (MIDDLE) <b>Pasion</b>		3 (LAST) <b>Atencio</b>	
AKA <b>Fatima Ciccarelli</b>			DOE TYPE/NUMBER		PHONE <b>****</b>
20 ADDRESS <b>****</b>				21 CITY <b>Willdomar</b>	25 STATE <b>CA</b>
23 ZIP <b>92595</b>					
6 SEX <b>Female</b>	14 RACE <b>White</b>	4 DOB <b>02-25-1976</b>	5 AGE <b>36 yrs</b>	RELATED CASE NUMBERS <b>N/A</b>	
BODY BAG #	TOE TAG <b>5925</b>	10 SS# <b>****</b>	HEIGHT <b>65.0 In</b>	WEIGHT <b>131.0 lbs</b>	HAIR <b>Black</b>
EYES <b>Brown</b>					
DRIVER'S LIC. #		STATE	HOW <b>family IDENTIFIED</b>		

### LEGAL NEXT OF KIN

NAME <b>Thomas Ciccarelli</b>		RELATIONSHIP <b>Husband</b>	MOTHER'S DOB/AG	DATE/TIME NOTIFIE <b>08-09-12 0000</b>	NOTIFIED BY <b>present</b>
ADDRESS				21 CITY <b>Willdomar</b>	25 STATE <b>CA</b>
23 ZIP <b>92595</b>					
PHONE <b>****</b>		ALTERNATE PHONE #			

### PLACE/DEATH OCCURRED

7 DATE <b>08-09-12</b>	8 TIME <b>2020</b>	DAY OF DEATH <b>Thursday</b>	PRONOUNCED BY <b>Dr. Glnther</b>
101 PLACE OF DEATH <b>Inland Valley Medical Center</b>			102 IP-ER/OP-DOA <b>In Patient</b>
FAC OTHER THAN HOSPITAL			
105 FACILITY ADDRESS OR LOCATION WHERE FOUND <b>36485 Inland Valley Drive</b>			106 CITY <b>Willdomar</b>

### INVESTIGATIVE SUMMARY

ADDITIONAL NARRATIVE ATTACHED  YES  NO

### MEDICAL HISTORY

# Riverside County Sheriff - Coroner Division

## Coroner Investigation



MODE **Natural**

CASE # **201206755**

STATUS **Post**

DEPUTY **Wendy Spykstra**

### MEDICAL

TRANSPORTED FROM home	ADMITTED TO? private auto	DATE 08-09-12	TIME 1250	M/R ORDERED Yes 08-09-12	MED REC # 7279311	BLOOD ORDERED Ordered 08-09-12
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### CAUSE OF DEATH

107 CAUSE (A) Acute bilateral bronchopneumonia of unknown etiology	TIME INTERVAL Unknown	109 BIOPSY PERFORMED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
(B) DUE TO		110 AUTOPSY PERFORMED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
(C)		AUTOPSY # A0910-12 AH      EXAM #
(D)		INDIGENT #

112 OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RELATED TO CAUSE GIVEN IN 107  
Congestive heart failure, mechanical mitral valve, recent pregnancy

113 WAS OPERATION PERFORMED FOR ANY CONDITION IN ITEM 107 OR 112? IF "YES" LIST TYPE OF OPERATION & DATE.

YES  NO DESCRIBE Mitral valve replacement---/--/1998

ATTENDING PHYSICIAN Dr. Mitzner	PHONE (866) 884-2807	DATE LAST ATTENDED unk	CAUSE GIVEN BY Allison G Hunt
115 PHYSICIAN TO SIGN D.C.	ADDRESS	PHONE	DATE 08-10-12      TIME 1030

### INJURY

119 SPECIFY MODE Natural	123 PLACE OF INJURY	120 AT WK?	121 DATE	122 HOUR
-----------------------------	---------------------	------------	----------	----------

125 LOCATION (include Zip Code)

124 DESCRIBE HOW INJURY OCCURRED

### PROPERTY

PROPERTY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	PROP RLS'D? <input type="checkbox"/> YES <input type="checkbox"/> NO	
--	---	--

### LAW ENFORCEMENT

AGENCY	AGENT	REPORT NUMBER
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### AUTOPSY

ORDERED BY	DATE	TOX ORDERED 08-10-12	TOX RECEIVED 08-29-12	AGENT(S) TO ATTEND
------------	------	-------------------------	--------------------------	-----------------------

### DISPO OF REMAINS

PRESENT LOCATION ****	MORGUE STATUS	VEHICLE TOWED		
TRANSPORTED BY ****	NOTIFIED BY ****	DATE ****	TIME ****	ARRIVED ****
44 MORTUARY Forest Lawn-Cathedral City		PHONE OF MORTUARY 800-204-3131		

REVIEWED BY      Marks      12-25-12 1953

Riverside County Sheriff - Coroner Division

Coroner Investigation



MODE **Natural**

CASE # **201206755**

STATUS **Post**

DEPUTY **Wendy Spykstra**

**Coroner Investigation**

09/04/2012

Report of Death to Coroner:

On 08/09/2012, at 2052 hours, I received a call from Registered Nurse Arugay, of the Inland Valley Medical Center, who called to report the inpatient death of thirty-six year old Fatima Atencio. Nurse Arugay said Atencio had been admitted from her home located at 21730 Amaryllis Court in Wildomar on 08/09/2012, at 1250 hours. She was brought to the hospital via private auto with complaints of respiratory distress. Atencio was reported to have a medical history of a mitral valve replacement approximately fourteen years prior and a recent pregnancy. The pregnancy was full term and her baby was delivered vaginally without complication three weeks prior. Atencio was under the care of Dr. Mitzner. When Atencio arrived to the emergency room she reportedly had low blood pressure and an elevated heart rate. She had no recorded fever. Atencio was stated to have been verbal, but altered and weak. Due to the respiratory arrest, Atencio was placed on a bi- level positive airway pressure machine but she did not respond. She was sedated, intubated and placed on a ventilator. Atencio was diagnosed with respiratory failure and congestive heart failure. Atencio was placed on vasopressors including Levophed, Dopamine and Neosynepherine. She was also placed on Lasix. Atencio did not show signs of improvement, despite being on the maximum allowed dosage of vasopressors, she continued to decline. Atencio coded four times and was provided advanced cardiac life saving measures each time. On the fourth code, Atencio did not respond to life saving measures and was pronounced dead by Dr. Ginther at 2020 hours.

Nurse Arugay said there was not any apparent trauma or any suspicious circumstances. She did state it was believed that Atencio may have not been compliant with her home medications. Atencio was reportedly not a smoker, did not drink alcohol and did not use illicit drugs. She had been recovering well from her recent childbirth.

I advised Nurse Arugay, due to Atencio's age, lack of medical history and recent childbirth, I would have her transported to the Riverside County Sheriff-Coroner Facility in Perris for further examination.

On 08/10/2012, I was contacted by the "Swanson Law Firm" and advised of an ongoing investigation involving the area in which Atencio had resided. There was concern that Atencio may have been affected by the events concerning the lawsuit and requested specific testing as well as relay this information to the forensic pathologist who was performing Atencio's examination. I received several emails from the Swanson Law Firm regarding the specifics of the lawsuit and additional testing requested. This information was forwarded to Forensic Pathologist Hunt who was the pathologist performing the autopsy of Fatima Atencio.

**Medical and Social Histories:**

Mitral valve replacement and recent childbirth.

**Medications:**

Lovenox and Ferrous sulfate.

**Transportation:**

Riverside County Sheriff - Coroner Division

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DEPUTY **Wendy Spykstra**

At 2214 hours, I contacted contract transportation and requested they transport Fatima Atencio to the Riverside County Sheriff-Coroner Facility in Perris.

-  
Documentation (copies of medical records, photos, etc.):

No photographs were taken and no personal property was collected. Medical records were obtained and reviewed. Admit blood was collected.

-  
Cause of Death:

I referred this case to the Sheriff-Coroner Forensic Center for determination of cause of death. An autopsy was performed on August 10, 2012. Numerous toxicology and histology tests were performed by Dr. Hunt during the course of this investigation. After lengthy review of autopsy results and test results, a cause of death was provided which is listed on the face cover of this report. I have mannered this death as Natural.

Report Prepared by: W. Spykstra, #N4229

Deputy Coroner

08/12/2012



# SHERIFF-CORONER

COUNTY OF RIVERSIDE

STANLEY SNIFF, Sheriff-Coroner

Allison Hunt, M.D.  
Forensic Pathologist

12 DEC 21 PM 3:02

## AUTOPSY PROTOCOL

**NAME OF DECEDENT:** CICCARELLI, FATIMA      **FILE NUMBER:** 2012-06755

### **FINAL DIAGNOSES:**

- I. Terminal Event: The decedent, a 36 year-old, white, female had a recent, approximately three weeks ago, uneventful pregnancy with uncomplicated vaginal delivery. Ms. Ciccarelli returned to the emergency department on August 9, 2012, with complaints of respiratory distress. She had an altered mental status and was weak. She was diagnosed with respiratory failure and congestive heart failure. Her condition continued to decline and she was coded four times and pronounced dead on the fourth code. The decedent had a past medical history of mitral valve replacement 14 years ago.
  
- II. Post-Mortem Examination:
  - A. No significant acute trauma.
  - B. Hospital blood and sputum cultures: negative.
  - C. Anoxic appearing brain.
  - D. Pericardial adhesions, mild.
  - E. Cardiomegaly (460 grams).
  - F. Remote mechanical valve replacement secondary to mitral valve prolapse.
  - G. Pulmonary edema, severe.
  - H. Pleural effusion, 150 milliliters, left chest cavity.
    - I. Hemorrhagic and dilated cervix.
    - J. Arteriolonephrosclerosis, mild.
  - K. Rib fractures consistent with cardiopulmonary resuscitative efforts.
  - L. Toxicology: Please refer to Toxicology Report.
  - M. Microscopy: Acute bronchopneumonia.

**CAUSE OF DEATH:** ACUTE BILATERAL BRONCHOPNEUMONIA OF UNDETERMINED ETIOLOGY

**OTHER SIGNIFICANT CONDITIONS:** CONGESTIVE HEART FAILURE, MECHANICAL MITRAL VALVE, RECENT PREGNANCY

"I hereby certify that I, Allison Hunt, M.D., Forensic Pathologist, have performed an autopsy on the body of Fatima Ciccarelli, on August 10th, 2012, commencing at 10:30 a.m., at the Perris Office of the Riverside County Sheriff-Coroner."

**EXTERNAL EXAMINATION:**

The body is that of a well-developed, well-nourished, 5 foot 5 inch, 131 pound (BMI = 21.8 kg/m<sup>2</sup>), white female who appears the reported age of 36 years. The body is refrigerated. Rigor mortis is fully developed and symmetric in the major muscle groups. Livor mortis is fixed over the posterior aspect of the body except over pressure points.

The scalp hair is long and black. The irides are brown. The sclerae and conjunctivae are pale and have no petechiae. The bridge of the nose is intact. The facial bones have no palpable fractures. The cheekbones and mandible have no trauma. The external auditory canals are patent and have no discharge or drainage. The teeth are natural and in good repair. The oral mucosa is atraumatic.

The neck has no external injury. The chest is symmetric. The breasts appear normal. The abdomen is slightly protuberant. The external genitalia are atraumatic and those of a normal adult female.

The upper and lower extremities are symmetric, normally developed, and have no palpable fractures. A blue Sheriff-Coroner identification band is around the right wrist. A tan identification tag on the left great toe has the inscription "2012-06755".

There is no evidence of significant acute trauma.

**EVIDENCE OF MEDICAL INTERVENTION:**

Electrocardiogram leads on the chest, abdomen, and bilateral, upper extremities. Cardiac defibrillator pads are on the chest and back. A nasogastric tube is within the left naris. An endotracheal tube is within the mouth. Intravenous access is in the left antecubital fossa and right groin. A hospital identification bracelet is around the left wrist. A Foley catheter is within the urethra. Gauze and adhesive cover needle puncture marks on the dorsal aspect of the bilateral, hands. Right anterior ribs three through five and the fourth anterior left rib are fractured, secondary to cardiopulmonary resuscitative efforts.

**IDENTIFYING MARKS AND SCARS:**

A linear scar is on the midline of the chest. Two small horizontal scars are in the mid upper abdomen.

**INTERNAL EXAMINATION:**

The reflected scalp has no injury. The calvarium and base of the skull have no fractures.

The dura mater and falx cerebri are intact and have no epidural or subdural collections of blood. The leptomeninges are thin and there is no subarachnoid hemorrhage or exudate. The brain is 1170 grams. The cerebral gyri and sulci are normal. The cerebrum has a well-demarcated gray-white interface and no identifiable tumors or lesions. The parenchyma has a mild, "dusky", anoxic appearance. The circle of Willis is complete, has no atherosclerosis and no malformation. The brainstem and cerebellum are symmetrical. The cranial nerves are intact. The pituitary gland is normal.

The anterior muscles of the neck are soft, red-brown and have no hemorrhage. The larynx and trachea are lined by intact, tan mucosa. The hyoid bone, and thyroid and cricoid cartilages are intact. The thyroid is beefy-red and has no discrete masses.

The anterior chest wall and abdominal wall have no abnormalities. The left pleural cavity contains 125 milliliters of serosanguineous fluid. The right pleural cavity has moderate parieto-pleural adhesions. The abdominal cavity has no adhesions and no abnormal fluid collections.

The 890 gram right lung and 830 gram left lung are normally lobated. The visceral pleural surfaces are dark purple and have a minimal amount of anthracotic pigment deposition. The major bronchi are patent and the mucosa is tan. The parenchyma is purple, exudes a severe amount of pink tinged fluid, and has no palpable consolidations or tumors. The perihilar lymph nodes are inconspicuous. The vasculature is patent.

The pericardial sac is intact and contains a physiologic amount of thin, yellow fluid. There are mild pericardial adhesions. The 460 gram heart has a smooth, glistening epicardial surface with a normal amount of adipose tissue. The coronary arteries arise normally and have a right dominant configuration. The coronary ostia are patent. The three main coronary arteries have minimal atherosclerosis. The atria are of normal size and the fossa ovalis is fused. The atrial appendages are free of antemortem thrombi. The endocardium is smooth and glistening. The myocardium is dark red-brown and has no areas of fibrosis or hemorrhage. The mitral valve has been replaced by a mechanical valve, which is intact and appears properly functioning. A suture is in the proximal portion of the aorta secondary to previous mitral valve surgery. No defects are identified. The chordae tendineae are normal. The aorta branches normally and has minimal atherosclerosis.

The 1450 gram liver has a smooth and transparent capsule. The red-tan parenchyma has a homogeneous lobular pattern with no lesions or nodules. Approximately 20 milliliters of green-brown bile and no calculi are within the gallbladder. The vessels of the porta hepatis are normal. The pancreas has normally lobulated, red-tan, parenchyma with no foci of calcification. The 160 gram spleen has an intact, tan wrinkled capsule. The parenchyma is maroon, boggy and without lesions.

The tongue is normal. The esophagus is normal and the gastroesophageal junction is well demarcated. The stomach contains 20 milliliters of brown fluid. The gastric mucosa is tan, smooth, and has a normal pattern of rugal folds. The pylorus and duodenum have no abnormalities. The small intestine, colon and rectum are of normal caliber and have no palpable masses. The vermiform appendix is normal.

The adrenal glands are normal. The 120 gram right kidney and 90 gram left kidney have mildly granular cortical surfaces. The left kidney has a large, wedged-shaped scar. The renal parenchyma is congested and has well-defined corticomedullary junctions. The renal arteries are patent. The pelves and ureters are patent, free of calculi, and of normal caliber. The ureters enter the bladder normally. The urinary bladder contains no urine. The bladder mucosa is smooth and white-tan.

The bilateral, fallopian tubes and ovaries are normal. The cervix is hemorrhagic and dilated. The uterus is mildly enlarged and slightly soft. Within the uterus is a 6 x 2.5 x 2.0 centimeter area of hemorrhagic, shaggy endometrium/myometrium.

There are no fractures of the clavicles, sternum, vertebral column or pelvis.

**TOXICOLOGY:**

Please refer to Toxicology Report.

**MICROSCOPY:**

**LUNG:** Sections reveal multiple areas of aggregates of neutrophils with cellular debris. The intra-alveolar spaces contain a mild-moderate of hemorrhage and numerous macrophages. No organisms are identified by special stains (GMS – negative).

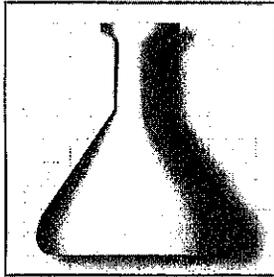
**UTERUS:** Sections reveal changes consistent with post-partum status. No products of conception are identified.

**LIVER:** No significant pathologic changes.

  
Allison Hunt, M.D.  
Forensic Pathologist

12.21.12  
Date

AH/cg/12/21/2012

**BIO-TOX**

# Bio-Tox LABORATORIES



Laboratory Director  
Dale R. Somers, C.L.S.

Toxicologist  
Maureen Black, C.T.S.

Toxicologist  
Ola Baward, M.S.

Toxicologist  
Erin Crabtree, M.S.

RIVERSIDE CORONER  
800 S. REDLANDS  
PERRIS, CA 92570

2012-06755  
ATENCIO, FATIMA P.

PATIENT NAME	SEX	DATE OF DEATH
ATENCIO, FATIMA P.	F	08/09/12

BTL NUMBER	REQUESTING AGENCY	REQUESTED BY	AGENCY NUMBER
2-28954-8	7400	SPYKSTRA	2012-06755

SPECIMEN	DATE COLLECTED	TIME TAKEN	DATE RECEIVED	DATE REPORTED
HOSP BLD	08/09/12	06:35	08/15/12	08/21/12

EXPANDED IMMUNOASSAY DRUG SCREEN

BLOOD SCREENED FOR:

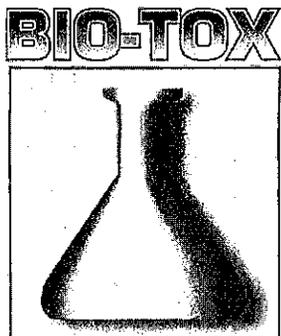
AMPHETAMINES (METHAMPHETAMINE, AMPHETAMINE), BENZODIAZEPINES, CANNABINOIDS, COCAINE AND OR METABOLITE, OPIATES (MORPHINE/CODEINE), PHENCYCLIDINE (PCP), BARBITURATES AND ALCOHOL.

TEST	RESULTS
ALCOHOL, ETHYL BLOOD	0.00% (W/V)
CORONER PANEL, BLOOD	NONE DETECTED

ANALYSIS BY: ERIN CRABTREE  
AND KRISTEN STEWARD

2012 AUG 29 PM 3:42

SHERRILL  
PUBLIC AFFAIRS



# Bio-Tox LABORATORIES



Laboratory Director      Toxicologist      Toxicologist      Toxicologist  
 Dale R. Somers, C.L.S.    Maureen Black, C.T.S.    Ola Bawardl, M.S.    Erin Crabtree, M.S.

RIVERSIDE CORONER  
 800 S. REDLANDS  
 PERRIS, CA 92570

2012-06755  
 ATENCIO, FATIMA P.

PATIENT NAME		SEX	DATE OF DEATH
-----		---	-----
ATENCIO, FATIMA P.		F	08/09/12
BTL NUMBER	REQUESTING AGENCY	REQUESTED BY	AGENCY NUMBER
-----	-----	-----	-----
2-28956-4	7400	SPYKSTRA	2012-06755
SPECIMEN	DATE COLLECTED	TIME TAKEN	DATE RECEIVED
-----	-----	-----	-----
FEM BLD	08/10/12	01:39	08/15/12
			12/12/12

-----  
 METALS/METALLOIDS ACUTE POISONING PANEL

SPECIMEN SCREENED FOR THE FOLLOWING:

ARSENIC, BISMUTH, MERCURY, SELENIUM, THALLIUM, ANTIMONY, LEAD, AND BARIUM

NOTE: THE FOLLOWING LABORATORY ANALYSIS WAS PERFORMED BY  
 NMS LABS, WILLOW GROVE, PA.

TEST	RESULTS
ORGANOPHOSPHATE PESTICIDES	SEE ATTACHED
ACUTE POISONING PANEL	SEE ATTACHED

2012 DEC 19 PM 2:04



NMS Labs

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3701 Walsh Road, PO Box 433A, Willow Grove, PA 19090-0437

Phone: (215) 657-4900 Fax: (215) 657-2972

e-mail: nms@nmslabs.com

Robert A. Middleberg, PhD, DABFT, DABCC-TC, Laboratory Director

Toxicology Report

Report Issued 12/12/2012 08:00

Patient Name ATENCIO, FATIMA

Patient ID 2-28956-3

Chain 11530547

Age 36 Y

Gender Female

Workorder 12426863

Page 1 of 4

To: 80014
Bio-Tox Laboratories
Attn: Maureen Black
1965 Chicago Avenue #C
Riverside, CA 92507

Positive Findings:

Table with 4 columns: Compound, Result, Units, Matrix Source. Rows include Arsenic (18 mcg/L), Mercury (3.8 mcg/L), Selenium (110 mcg/L), and Barium (1100 mcg/L), all in Blood matrix.

See Detailed Findings section for additional information

Testing Requested:

Table with 2 columns: Analysis Code, Description. Codes include 2693B (Metals/Metalloids Acute Poisoning Panel, Blood) and 3244B (Organophosphate Pesticides, Blood).

Specimens Received:

Table with 5 columns: ID, Tube/Container, Volume/Mass, Collection Date/Time, Matrix Source, Miscellaneous Information. Shows two specimens (001 and 002) in Red Top Tubes, collected on 08/10/2012.

All sample volumes/weights are approximations.

Specimens received on 12/05/2012.

Vertical stamp: 2012 DEC 19 PM 2:04



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Workorder 12426863  
Chain 11530547  
Patient ID 2-28956-3

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Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Arsenic	18	mcg/L	11	001 - Blood	ICP/MS
Mercury	3.8	mcg/L	3.0	001 - Blood	ICP/MS
Selenium	110	mcg/L	20	001 - Blood	ICP/MS
Barium	1100	mcg/L	44	001 - Blood	ICP/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. Arsenic - Blood:

Arsenic is a metallic element. It is prevalent in the earth's crust and can therefore be found in numerous environmentally-related sources, e.g., well water, shellfish and soil. Individuals who are exposed to these sources may have acutely or chronically elevated body burdens of arsenic. Arsenic exists in numerous chemical compounds as well as several chemical forms. Not all arsenical compounds are equal in toxicity.

In unexposed, normal individuals, arsenic concentrations in blood are <10 mcg/L, but may be higher after seafood consumption. In reported poisoning fatalities, a range of 600 - 9300 mcg/L blood (mean, 3300 mcg/L) has been reported.

Urinary arsenic concentrations are typically less 50 mcg/L unexposed individuals. With occasional seafood consumption, the normal urinary arsenic concentration may be increased to between 200 - 1700 mcg/L. Other potential factors causing increased concentrations of arsenic include consumption of well-water with high arsenic content.

2. Barium - Blood:

Barium is present in trace amounts in all human tissues, and some studies indicate that it is an element essential to proper growth. The concentration of barium in normal human blood is approximately 2 - 400 mcg/L, most of which is found in the plasma fraction.

Inorganic barium compounds are used extensively in industry, and in glass, plastic and rubber manufacture. Specimens submitted for elemental testing require special handling to reduce potential sources of external contamination. Without such precautions, the finding of an elevated barium concentration in a specimen may be the result of environmental contamination from such things as collection devices, specimen containers and sample preservatives, and should be interpreted accordingly.

In two intentional, but non-fatal barium poisonings serum barium concentrations were 3400 and 7800 mcg/L. In one fatality following barium ingestion, the barium concentration in blood was 1900 mcg/L.

3. Mercury - Blood:

Mercury is a trace element, which is widely used, in industrial and agricultural products and processes, and in medicine and dentistry. Dietary intake of mercury in man ranges from approximately 1 to 30 mcg per day. Industrial exposure to mercury occurs through inhalation or by dermal absorption. Mercury exposure can be due to elemental, inorganic and organic forms of the element.

Total blood mercury levels of up to 6 mcg/L have been measured in persons with low fish consumption and up to 200 mcg/L blood in individuals consuming large quantities of predatory marine fish. Typically, 'normal' mercury blood concentrations are less than 10 mcg/L.

Postmortem total blood mercury concentrations ranging from 20 - 110 mcg/L with an average of 60 mcg/L have been reported in a Japanese population.

2012 DEC 19 PM 2:04



Reference Comments:

The average oral lethal dose of inorganic mercury salts is approximately 1 gram. Toxic effects of inorganic mercury poisoning include gastroenteritis and tubular necrosis leading to renal failure. Elemental mercury is most dangerous when volatilized leading to pulmonary and CNS effects. Postmortem blood mercury concentrations can vary according to the form of mercury and the time since exposure. In two cases of inorganic mercury poisoning, blood concentrations of 1700 and 2100 mcg/L were measured. Blood concentrations of mercury after both fatal and non-fatal elemental mercury poisoning usually exceed 200 mcg/L.

4. Selenium - Blood:

Selenium is an essential trace metal. It is also used in various industries, e.g., electronic semiconductors and rubber. In medicinals, selenium can be found in shampoos and dietary supplements. The compound exists in elemental, organic and inorganic forms.

Reported reference concentrations of selenium in whole blood of normal individuals range from 50 - 230 mcg/L (mean, 100 mcg/L). In fatalities from ingestion of selenium-containing compounds, reported blood concentrations range from 500 - 18000 mcg/L (mean, 5900 mcg/L).

Chain of custody documentation has been maintained for the analyses performed by NMS Labs.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded six (6) weeks from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

Analysis Summary and Reporting Limits:

Acode 2693B - Metals/Metalloids Acute Poisoning Panel, Blood

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Arsenic	11 mcg/L		

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Bismuth	11 mcg/L		

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Mercury	3.0 mcg/L		

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Selenium	20 mcg/L		

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Thallium	11 mcg/L		

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Antimony	11 mcg/L		

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

2012 DEC 19 PM 2:04



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Workorder 12426863  
Chain 11530547  
Patient ID 2-28956-3

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**Analysis Summary and Reporting Limits:**

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Barium	44 mcg/L		

-Analysis by Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Lead	1.1 mcg/dL		

Acode 3244B - Organophosphate Pesticides, Blood

-Analysis by High Performance Thin Layer Chromatography (HPTLC) for:

<u>Compound</u>	<u>Rpt. Limit</u>	<u>Compound</u>	<u>Rpt. Limit</u>
Azinphos-Methyl	0.30 mcg/mL	Fonofos	0.30 mcg/mL
Carbophenthion	0.30 mcg/mL	Malathion	0.30 mcg/mL
Chlorpyrifos	0.30 mcg/mL	Metasystox	0.30 mcg/mL
Coumaphos	0.30 mcg/mL	Methyl Parathion	0.30 mcg/mL
Diazinon	0.30 mcg/mL	Mevinphos	0.30 mcg/mL
Dichlorvos	0.30 mcg/mL	Paraoxon	0.30 mcg/mL
Dimethoate	0.30 mcg/mL	Parathion	0.30 mcg/mL
EPN	0.30 mcg/mL	Phorate	0.30 mcg/mL
Ethion	0.30 mcg/mL	Terbufos	0.30 mcg/mL
Fenchlorphos	0.30 mcg/mL	p-Nitrophenol	0.30 mcg/mL
Fenthion	0.30 mcg/mL		

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