



Client: WELLNESS INSTITUTE OF SOU 2200 PACIFIC COAST HIGHWA 217 HERMOSA BEACH, CA 90254 Phys: LAL, ROMAN	13675 (310) 569-0009	Patient: SULLEY, JAMIE DOB: 08/11/1965 ID#: R0000144617 Phone: () - Chart#:	Age:53 Room#:	Sex:F
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Access#: 001508336	Coll. Date: 09/25/18 Coll. Time: 08:00 AM	Recv. Date: 09/26/18 Recv. Time: 11:09 AM	First Report on: 09/26/18 Final Report on: 10/01/18 Print Date: 07/31/19 Print Time: 16:04
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Report Status: FINAL

SPECIMEN INFO: TIMED URINE

Creatinine, Urine **19 mg/dL**

Toxic Heavy Metals				
Test Name	Results	Range	Units	Graph
Aluminum, Urine	< dL	< 30	ug/g	
Antimony, Urine	1.5 H	0 - 0.9	ug/g	
Arsenic, Urine	92.9	0 - 100	ug/g	
Barium, Urine	< dL	0 - 6	ug/g	
Bismuth, Urine	< dL	0 - 10	ug/g	
Cadmium, Urine	< dL	0 - 2	ug/g	
Cesium, Urine	18.9 H	0 - 12	ug/g	
Gadolinium, Urine	< dL	0 - 0.9	ug/g	
Germanium, Urine	< dL	0 - 2	ug/g	
Lead, Urine	0.7	0 - 10	ug/g	
Mercury, Urine	8.4	0 - 10	ug/g	
Nickel, Urine	< dL	0 - 7	ug/g	
Niobium, Urine	< dL	0 - 1.0	ug/g	
Platinum, Urine	1.0	0 - 1	ug/g	
Rubidium, Urine	3004.1	0 - 4000	ug/g	
Thallium, Urine	0.3	0 - 0.7	ug/g	
Thorium, Urine	< dL	0 - 0.1	ug/g	
Tin, Urine	< dL	0 - 10	ug/g	
Titanium, Urine	< dL	0 - 6	ug/g	
Tungsten, Urine	< dL	0 - 1.0	ug/g	
Uranium, Urine	< dL	0 - 0.05	ug/g	

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<dL = less than detectable limit

	Results	Units	Reference Range	Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.
Creatinine, Urine	19 L	mg/dL	20-320	

Comments:



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Nutritional Heavy Metals

Test Name	Results	Range	Units	Graph
Calcium, Urine	<52.63	15 - 300	mg/g	
Magnesium, Urine	52.63	10 - 200	mg/g	
Phosphorus, Urine	552.63	50 - 2000	mg/g	
Potassium, Urine	79.47	15 - 150	mmol/g	
Sodium, Urine	110.53	20 - 250	mmol/g	
Chromium, Urine	< d1	0.3 - 12	ug/g	
Cobalt, Urine	0.59	0.03 - 7.00	ug/g	
Copper, Urine	9.4	2 - 85	ug/g	
Iron, Urine	< d1	0 - 2000	ug/g	
Lithium, Urine	51.1	10 - 200	ug/g	
Manganese, Urine	< d1	0 - 0.5	ug/g	
Molybdenum, Urine	34.0	8 - 200	ug/g	
Selenium, Urine	34.3	20 - 200	ug/g	
Strontium, Urine	127.5	100 - 1000	ug/g	
Vanadium, Urine	< d1	0 - 5	ug/g	
Zinc, Urine	455.5	100 - 3000	ug/g	

<d1 = less than detectable limit

Creatinine, Urine	Results	Units	Reference Range	Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.
	19 L	mg/dL	20-320	

Comments:

All Metal Testing on ICP-MS/MS were developed and their performance characteristic determined by Access Medicals Labs. They have not been cleared or approved by the FDA. The laboratory is regulated under CLIA and qualified to perform high complexity testing. These tests are used for clinical purposes. They should not be regarded as investigational or for research.



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Abnormal Result Summary:

1. Antimony: Bioavailable antimony (Sb) can be excreted through urine or feces, making atypical urine toxicology test an effective determinant of high antimony exposure. There are two distinct types of antimony to consider: Sb3+ is an unstable form of antimony that interacts freely with the tissues of the body, leading to harmful developments within those tissues, and is excreted mostly through feces. Sb5+ is a naturally more stable and oxidative form of antimony, meaning it binds less effectively to tissue, is inherently less toxic, and is excreted primarily through urine. While both forms of antimony are unique, the following analysis of antimony exposure does not distinguish between the two.

Common sources of extreme exposure are often occupational, caused by inhaling antimony in unsafe industrial environments with poor working conditions such as antimony rich refineries and power plants that rely on fossil-fuels. Aerosols and paints containing antimony are easily inhaled, and those with low water solubility can be retained in the lungs for long periods of time. Glass work and indoor firing ranges are known to impart high amounts of airborne antimony particles as well.

Antimony poisoning can lead to several negative symptoms, including chronic headaches, dizziness, vomiting, muscle weakness, fatigue, stomach ulcers, liver damage, kidney damage, and myopathy. Spotting of the skin can occur as pustules erupt along the body's sebaceous glands when exposed to airborne antimony. On a cellular level, antimony alters natural defense mechanisms, potentially leading to the development of carcinogenesis.

If necessary, a hair element test can suffice as an additional means for detecting antimony exposure.

2. Cesium: Natural instances of extreme cesium (Cs) exposure are generally rare, with significant concentrations of the element most commonly introduced to the body during certain cancer treatments. Regardless, as with all heavy metals, it should be noted that an excess of bioavailable cesium can come with a slew of detrimental health effects, especially when in a radioactive state. As cesium is primarily absorbed into the brush borders of the body's intestines before excreting through urine and feces, the severity of a patient's cesium exposure can be accurately measured by conducting a urine toxicology test.

The most renowned cases of cesium poisoning revolve around drastic nuclear events, such as exposure to fallout from the atmospheric testing of nuclear weapons (a dated practice) and accidents surrounding nuclear power plants. Organic food sources near these incidents, including hunted animal meat, local livestock products, and even human breastmilk, have been discovered to hold high radioactive cesium counts. Presently, some cancer patients are exposed to cesium when undergoing high pH therapy, a treatment that relies on the oral ingestion of cesium supplements in an effort to reduce the acidity of tumorous cells by raising their basic pH level. Occupational exposure to cesium can also occur, especially in positions regarding the nuclear power industry, though such facilities take precautionary measures to reduce dangerous contact.

Cesium is a stable element in its original form, and is typically safe once assimilated by the body. Radioactive cesium, on the other hand, can be extremely harmful and lead to the development of multiple adverse conditions. As with most forms of acute radiation poisoning, nausea, vomiting, diarrhea, unnatural bleeding of the orifices, coma, and death are all possible symptoms.

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<dl = less than detectable limit

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Creatinine, Urine	19 L	mg / dL	20 - 320	

Comments:



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3. Platinum: Platinum (Pt) is a non-toxic metal that can be detected throughout the environment in harmless trace amounts, with rich deposits of platinum most commonly located and mined in South America. As platinum is largely excreted through urine, acute readings of the element found in an individual's urine toxicology is usually an indication of either recent contact or extreme exposure.

Most popularly used as a precious metal in jewelry, platinum is also frequently found in surgical tools and in some automobile exhaust systems. Platinum compounds, such as cisplatin, are applied in chemotherapy treatments to combat cancer. However, there are potentially dangerous sources of platinum contact as well, such as the occupational exposure to platinum salts. These salts are most often introduced to chemists and industrial workers during metal refining processes, and can lead to the development of multiple serious conditions.

Symptoms of exposure to platinum salts can include the onset of occupational asthma, irritation of the skin, hearing damage, organ damage, and DNA alterations. Another possible danger of platinum intake lies, specifically in cases of excessive exposure, where platinum assimilated by the body may engage in potentiation with other compatible heavy metals to create a new toxic reaction, especially when it reacts with selenium.

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