

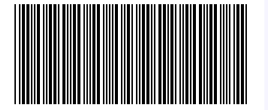


US BioTek • PATIENT REPORT

16020 Linden Av N Shoreline WA, 98133 • cservice@usbiotek.com • +1 206 365 1256



Clinical Laboratory Improvement Amendments



25332-0163

* US BioTek US BioTek, 16020 Linden Av N, Shoreline WA 98133

Lab ID
Patient ID PAT-100009
Ext ID 25332-0163
Clinical Notes 3026070000

Test Patient
Sex: Female • 45yrs • 01-Jan-80

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28-Nov-25

Post-Chelation Heavy Metals and Minerals

Collected

Specimen type - Urine, Spot

09-May-26 11:28am

PHYSIOLOGICAL MINERALS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Calcium	195.04		(<450.00)	mg/gCR
Iron	54		(<200)	ug/gCR
Magnesium	25.37		(<290.00)	mg/gCR
Zinc	215.45		(<900.00)	ug/gCR

TRACE MINERALS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Boron	372		(<5500)	ug/gCR
Chromium	0.70		(<4.60)	ug/gCR
Cobalt	0.00		(<1.60)	ug/gCR
Copper	26.9		(<55.0)	ug/gCR
Germanium	0.00		(<1.50)	ug/gCR
Lithium	46.35		(<55.00)	ug/gCR
Manganese	1.66	H	(<1.50)	ug/gCR
Molybdenum	15.65		(<65.00)	ug/gCR
Nickel	<DL		(<2.00)	ug/gCR
Rubidium	560		(<3000)	ug/gCR
Selenium	40.20		(10.00-63.00)	ug/gCR
Strontium	17.15		(<310.00)	ug/gCR
Vanadium	0.31		(<8.00)	ug/gCR



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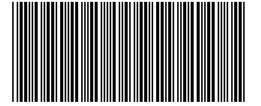
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TOXIC METALS

SERVICE	RESULT	H/L	REFERENCE	UNITS
Aluminium	6.26		(<40.00)	ug/gCR
Antimony	0.32		(<1.00)	ug/gCR
Arsenic	0.78		(<35.00)	ug/gCR
Barium	0.23		(<5.70)	ug/gCR
Beryllium	0.09		(<0.60)	ug/gCR
Bismuth	<DL		(<1.00)	ug/gCR
Bromine	3774		(<4800)	ug/gCR
Cadmium	0.01		(<0.60)	ug/gCR
Cesium	1.34		(<10.30)	ug/gCR
Gadolinium	<DL		(<0.23)	ug/gCR
Gallium	<DL		(<0.10)	ug/gCR
Lead	0.81		(<8.00)	ug/gCR
Mercury	<DL		(<3.0)	ug/gCR
Palladium	1.20		(<15.00)	ug/gCR
Platinum	<DL		(<1.00)	ug/gCR
Silver	<DL		(<0.10)	ug/gCR
Tellurium	<DL		(<0.80)	ug/gCR
Thallium	1.36		(<1.50)	ug/gCR
Tin	0.09		(<0.50)	ug/gCR
Titanium	11.38		(<50.00)	ug/gCR
Tungsten	0.00		(<0.50)	ug/gCR
Uranium	<DL		(<0.10)	ug/gCR
Zirconium	0.00		(<5.00)	ug/gCR



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Chelator-Specific Reference Ranges

CHELATOR SPECIFIC ORIENTATION RANGES:

The following chelator-specific ranges have been developed based on the fact that each chelator has a specific binding capacity. The ranges were developed based on statistical calculations of a population challenged with one ampoule DMPS or 300mg DMPS.

A urine excretion value/result higher than the Orientation Ranges below, indicates a moderate to high toxic burden.

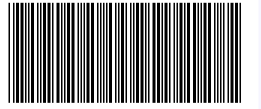
A test result higher than the normal (pre-chelation) reference range and lower than the Orientation Range indicates a low to moderate toxic burden.

ELEMENT	DMSA (ug/gCR)	EDTA (ug/gCR)	DMPS (ug/gCR)
Toxic Metals			
Aluminium (Al)	< 50	< 100	< 50
Antimony (Sb)	< 10	< 10	< 15
Arsenic (As)	< 100	< 100	< 100
Barium (Ba)	< 10	< 20	< 10
Beryllium (Be)	< 2.0	< 2.0	< 2.0
Bismuth (Bis)	< 10	< 10	< 10
Cadmium (Cd)	< 5.0	< 5.0	< 5.0
Cesium (Cs)	< 30	< 30	< 30
Cobalt (Co)	< 15	< 15	< 15
Gadolinium (Gd)	< 5.0	< 5.0	< 5.0
Lead (Pb)	< 30	< 80	<20
Mercury (Hg)	< 20	< 10	< 40
Nickel (Ni)	< 20	< 30	< 20
Palladium (Pd)	< 15	< 15	< 15
Platinum (Pt)	< 5.0	< 5.0	< 5.0
Silver (Ag)	< 5.0	< 5.0	< 5.0
Thallium (Tl)	< 10	< 10	< 10
Tin (Sn)	< 15	< 20	< 15
Titanium (Ti)	< 50	< 50	< 50
Uranium (U)	< 1.0	< 1.0	< 1.0
Essential Elements			
Manganese (Mn)	< 5.0	< 10	< 5.0
Strontium (Sr)	< 310	< 310	< 310
Tungsten (W)	< 10	< 10	< 10
Vanadium (V)	< 8.0	< 10	< 8.0
Zinc (Zn)	< 1500	< 2000	< 1500



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Nutrient Mineral Comment

MANGANESE ELEVATED (URINE):

Elevated urinary manganese suggests increased manganese exposure and renal excretion. In a first-morning urine sample, this finding reflects recent exposure or mobilisation rather than tissue accumulation.

Clinically, elevated manganese exposure may be associated with non-specific neurological symptoms, fatigue, or mood changes at higher or sustained levels, although mild elevations are often asymptomatic.

From a functional medicine perspective, this result should be interpreted in the context of occupational or environmental exposure (e.g. welding fumes, industrial dust), hepatic function, and iron status, as iron deficiency may increase manganese absorption. Correlation with clinical history and, where indicated, blood manganese may assist interpretation.

Treatment: Identify and eliminate the source of manganese exposure, often in occupational settings like welding or battery manufacturing. In some cases, iron supplementation in conjunction with chelation therapy may lead to improvements in neurological symptoms that chelation alone does not provide.

Methodology

Inductively Coupled Plasma Mass Spectrometry (ICP-MS), Automated Chemistry/Immunochemistry

Sample Report