



**PATIENT NAME:** Mr. Wolf Miyamoto  
**SPECIMEN ID #:** 700009  
**SPECIES:** Canine  
**GENDER:** Male Neutered  
**AGE:** 4.0  
**WEIGHT:** 16.5 lb

**MRN:** 1082298  
**DRAW DATE:** Not Provided  
**RECEIVED DATE:** 6-Jun-22  
**REPORT DATE:** 17-Jun-22  
**SAMPLE TYPE:** Fur

**VETERINARIAN:** Dr. Max Smith  
**FACILITY:** VDI Animal Hospital  
 123 Main Street  
 Small Town, CA 55555  
**PH:** 805-555-5555  
**FAX:** 805-555-5556

Fur/hair is the only matrix suitable for studying a long period of exposure to pollutants. The pollutants circulating in the blood are automatically captured by the web of the fur when it grows and stays intact. Blood analysis is useful, but contrary to fur/hair analysis, blood is a snapshot and not the culmination of weeks of exposure.

Test	Range	Flag	Previous	Results	Notable Change	Comments
				PPM		
Ca	700-3000			2995.04		Patient values outside of the normal ranges for nutritional minerals may be the result of inadequate diet, environmental exposure, poor metabolism, or other conditions.  Evaluate patient and retest in 2 months after correcting for any irregularities.  Refer to Mineral Supplementation page for guidance.
Co	0.02-0.5			0.08		
Cr	0.6-5	low		0.15		
Cu	8-25			21.12		
Fe	25-400	low		14.04		
K	200-1400			249.19		
Mg	100-450			318.64		
Mn	1-10	low		0.33		
Na	700-10000			1178.16		
P	220-500			398.49		
Se	0.4-2.5	low		0.36		
Si	20-600			35.76		
Sr	0-4.5	high		23.68		
V	0-1.2			0.33		
Zn	150-300			153.64		
Ag	0-2			0.00		Patient values are all within the normal limits indicating no historical or ongoing issues with environmental minerals.  Retest if major diet or health change occurs, or animal's environment substantially changes.
Al	0-250			18.73		
Au	0-2			0.00		
B	0-5			0.64		
Ba	0-5			0.00		
Be	0-1			0.00		
Li	0-0.5			0.06		
Mo	0-3			0.00		
Ni	0-10			0.87		
Sn	0-5			3.38		
<b>As</b>	0-1			0.01		Patient has no significant elevation of toxic metals
<b>Cd</b>	0-0.7			0.20		
<b>Hg</b>	0-0.2			0.04		
<b>Pb</b>	0-10			0.33		

Reference intervals should be considered as guidelines for comparison with reported test values. These reference ranges were established from a large population of "healthy" animals. They should not be considered as absolute limits for determining deficiency, toxicity or acceptance until fully validated element-specific studies are completed.



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**The following minerals have been identified as being outside of the reference interval.**

For a description of all minerals, visit our website at: [www.vdilab.com](http://www.vdilab.com)

Symbol	Name	Description
<b>Cr</b>	<b>Chromium</b>	Chromium is an essential dietary mineral. It can be found from the consumption of products such as yeast, wheat, apples and green pepper. A deficiency of chromium can cause insulin resistance and diabetes, however elevated Chromium may be toxic especially if found in fur- indicating long term exposure.
<b>Fe</b>	<b>Iron</b>	Iron in fur suggest the digestion of iron rich foods or consuming certain items such as prenatal vitamins, fertilizer, oxygen absorbers and handwarmers. Iron deficiency may be an indication of nutrient deficiencies or underlying conditions. Too much iron may cause a range of cardiac and GI-related symptoms, however this is typically associated with sudden ingestion of large amounts of Iron.
<b>Mn</b>	<b>Manganese</b>	Manganese is dietary derived and can be absorbed by digesting items that have high concentration of manganese. Whole grains, eggs, nuts and leafy vegetables contain a good amount of manganese.
<b>Se</b>	<b>Selenium</b>	Selenium is an essential element. Selenium can be found in Brazil nuts, fish, game poultry etc. Too much consumption of selenium could become toxic.
<b>Sr</b>	<b>Strontium</b>	Early studies have shown that dogs who eat high levels of sardines or sardine oil supplements have high levels of strontium. Strontium acts in the same way that calcium does in the body and deposits within the bone.

## Mineral Support

Testing By: Delta-Biomarkers SAS



VDI Lab Services

4685 Runway St. Ste K Simi Valley, CA 93063  
ph: 805-577-6742 fax: 805-426-8115

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Essential nutrients, those that are obtained by ingestion, are very important to health. Ensuring your pet is receiving enough can be as simple as supplementing their current diet to improve mineral content. Below is patient-specific dosing guidelines to help your pet obtain the proper minerals that may have been low as indicated in this fur analysis.

## Mineral Supplement Guidelines, prepared specifically for Mr. Wolf Miyamoto

### Canine Minerals, Rx Vitamins for Pets



Canine Minerals provides macro- and micro-mineral supplementation, specifically calcium for dogs to help balance home-prepared meals and as a general mineral supplement when required.

Canine Minerals is intended to provide:

- Calcium
- Magnesium
- Iron
- Strontium
- Sodium
- Manganese
- Phosphorus
- Potassium
- Chromium

### DAILY DOSE

**1.5 scoops**  
Split among meals

This dose is a total dose for the day. Do not give more than recommended.

### Supplementing with Canine Minerals:

Supplementation listed above is a total daily dose and should be split among meals to avoid any GI discomfort. If your dog is showing signs of discomfort, excessive thirst, panting, or other abnormal signs, stop use of the product and consult a veterinarian.

The dosage of the individual minerals is very important. Seemingly small variations in mineral content in a diet can have significant impact on animal health. Any time dietary changes are made, it's important to watch for changes in health and behavior, and retest any labwork to ensure proper balance is achieved.

This product contains calcium and magnesium, both of which are tightly regulated in the body. If your dog's recent blood work shows abnormal calcium or magnesium levels, consult your veterinarian before starting Canine Minerals. Conversely, if your dog is experience issues with this supplement, blood work may be warranted to check blood levels.

For more information, contact VDI Laboratory (805-577-6742) or Rx Vitamins (800-792-2222)

### The Mineral Formula:

The Canine Minerals Formulas was designed to be used primarily as a mineral-rich dietary supplement to balance home-prepared meals for dogs. It can also be used as a general mineral supplement for those patients who would benefit from dietary mineral supplementation.

The Minerals Formula is a 100% natural multiple mineral and trace element product. It is mined from an exclusive source in the western United States, containing 9 macro- and micro- minerals for optimum health. This mineral deposit, which is totally unique in its makeup, is marine sedimentary in nature and estimated to have been formed during the Triassic-Jurassic periods of the Mesozoic Era, approximately 150 to 200 million years ago. It is one of the most complete sources of naturally-occurring essential minerals and trace elements available.