



Final Report Date:	02-15-2021 04:23	Specimen Collected:	01-29-2021
Accession ID:	2101281007	Specimen Received:	01-30-2021 12:49

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
CHILUKURI	SIRI	FEMALE	1998-08-05	2101281007	01-29-2021



PATIENT

Name: SIRI CHILUKURI
Date of Birth: 1998-08-05
Gender: Female
Age: 22
Height: 5'7" Weight: 175 lbs

Telephone #: 13122821803
Street Address: 310 E CULLERTON ST
City: CHICAGO
State: IL Zip #: 60616
Email: sirichilukuri@gmail.com

Fasting: FASTING No. of hours: 12.0
EMR #: 2101281007

PROVIDER

Practice Name: Optimal Health Centers - Chicago
Provider Name: Bhavesh Patel, MD (9184)
Street Address: 77 W. WACKER DR., 45TH FLOOR
City: CHICAGO
State: IL
Zip #: 60601
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Fax #: 3122838001
Phlebotomist: 433



The comments in this report are meant only for informational purposes and do not constitute medical advice. Please consult your physician for any medication, treatment or life style management.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
CHILUKURI	SIRI	FEMALE	1998-08-05	2101281007	01-29-2021

Anemia	Current	Reference Range	Previous
Ferritin (ng/mL)	47	13~150	
Iron (ug/dL)	58	37~145	
UIBC (µg/dL)	351 H	112~347	
TIBC (µg/dL)	409	149~492	
Transferrin Saturation (%)	14	12~45	

Nutrition	Current	Reference Range	Previous
Vitamin D, 25-OH* (ng/mL)	41.2	30.0~108.0	
Vitamin B12 (pg/mL)	452	232~1245	

Tests flagged with * were developed by and performance characteristics were determined by Vibrant America. Indicated tests are not FDA-cleared or approved. The laboratory is regulated under CLIA and is CAP certified hence qualified to perform high-complexity testing. This test is used for clinical purposes. It should not be regarded as investigational or for research. Tests flagged with ¹ were performed at Vibrant Genomics. Tests flagged with ² have analytics done at Vibrant Wellness. Laboratory Director: Mervyn Sahud, MD CLIA: 05D2078809 CLF: 00346278 Vibrant America Clinical Laboratory, 1021 Howard Avenue, Suite B, San Carlos, CA 94070. Phone: +1(866)364-0963; FAX: +1(650)508-8260; Email: support@vibrant-america.com

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
CHILUKURI	SIRI	FEMALE	1998-08-05	2101281007	01-29-2021

Lipids	Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
	Cholesterol, Total (mg/dL)	188			≤199	200~240	≥241	
	LDL Calculation (mg/dL)		126		≤99	100~129	≥130	
	HDL Direct (mg/dL)		49		≥66	45~65	≤44	
	Cholesterol/HDL Ratio		3.8		≤3.5	3.6~4.9	≥5.0	
	Triglyceride (mg/dL)	63			≤149	150~200	≥201	

Comments

Follow NCEP: ATPIII guidelines. Dietary strategies to consider include adequate intake of monounsaturated fats and omega-3 fatty acids, moderate alcohol intake, reduction of total carbohydrate to less than 50% of calories, emphasis on low glycemic-load foods and reduction of fructose, weight loss and regular exercise.

LDL Direct	Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
	LDL Direct (mg/dL)			149		≤99	100~129	≥130

Comments

Follow NCEP: ATPIII guidelines. Dietary strategies to consider include adequate intake of monounsaturated fats and omega-3 fatty acids, moderate alcohol intake, reduction of total carbohydrate to less than 50% of calories, emphasis on low glycemic-load foods and reduction of fructose, weight loss and regular exercise.

Inflammation	Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
	Homocysteine (μmol/L)		11		≤9	10~14	≥15	
	hs-CRP (mg/L)			5.5	≤0.9	1.0~3.0	≥3.1	

Comments

Homocysteine: Consider vitamin supplementation with pyridoxine (vitamin B6), vitamin B12, and folic acid. A diet low in methionine is recommended in addition to the B vitamins.;
 Calculate DAS score. If DAS 6, likely diagnosis of rheumatoid arthritis as per ACR guidelines. Consider analgesics such as NSAIDs and disease-modifying anti rheumatic drugs (DMARDs). Regular exercise recommended.;
 hs-CRP: Consider weight loss, insulin control, and smoking cessation to reduce hs-CRP levels. Consider aspirin, lipid lowering, and anti-diabetic agents.

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LipoProtein Markers	Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
	sdLDL* (mg/dL)	37.7				≤50.0		≥50.1

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Glycemic Control	Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
	Hemoglobin A1c (%)	5.2				≤5.6	5.7~6.4	≥6.5

Insulin Resistance	Current	Reference Range	Previous
Adiponectin* (ug/mL)	7.7		
Ferritin (ng/mL)	47	13~150	

Adiponectin:

Your BMI is **27 kg/meters-squared**

Body Mass Index (BMI)	Male	Female
kg/meters-squared	ug/mL	ug/mL
<25	4.7 - 49.2	8.5 - 56.1
25-30	3.8 - 35.0	6.1 - 47.2
>30	2.2 - 32.6	4.9 - 42.1

Body Mass Index (BMI) = (weight in Kg) / (height in metres)²

Beta Cell Function	Test name	In Control	Moderate	High Risk	In Control Range	Moderate Range	High Risk Range	Previous
	Insulin (μU/mL)			49.6		2.6~24.9		≤2.5 ≥25.0

Comments

There may be some evidence of beta cell strain/ dysfunction/ failure. Consider losing excess weight, eating a healthy diet that is high in fiber and restricted in carbohydrates and getting regular amounts of exercise. Consider DPP4 or GLP-1.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
CHILUKURI	SIRI	FEMALE	1998-08-05	2101281007	01-29-2021

Comprehensive Metabolic Panel	Current	Reference Range	Previous
Sodium (mmol/L)	139	136~145	
Potassium (mmol/L)	4.5	3.5~5.1	
Chloride (mmol/L)	100	98~107	
Carbon Dioxide (mmol/L)	17 L	18~29	
Glucose(Renal) (mg/dL)	84	70~100	
BUN (mg/dL)	14	6~20	
Creatinine (mg/dL)	0.78	0.50~0.90	
eGFR (mL/min/1.73m ²)	>90	≥60	
eGFR(African-American) (mL/min/1.73m ²)	>90	≥60	
BUN/Creatinine Ratio	18	10~20	
Calcium (mg/dL)	9.6	8.9~10.6	
Albumin (g/dL)	4.9	3.5~5.2	
ALT (U/L)	15	≤33	
AST (U/L)	14	≤32	
Bili, Total (mg/dL)	0.3	≤1.2	
Protein, Total (g/dL)	7.8	6.2~8.0	
Alkaline Phosphatase (U/L)	70	35~104	
Serum osmolality, calculated (mOsm/kg)	296.7	285.0~315.0	

Labnotes

eGFR :- The eGFR is calculated from the Creatinine result and varies by patient gender, age and race. If patient is African-American, the eGFR(African-American) value is applicable.

Hepatic Function Panel	Current	Reference Range	Previous
ALT (U/L)	15	≤33	
AST (U/L)	14	≤32	
Alkaline Phosphatase (U/L)	70	35~104	
Albumin (g/dL)	4.9	3.5~5.2	
Bili, Total (mg/dL)	0.3	≤1.2	
Bili, Direct (mg/dL)	<0.2	≤0.3	
Protein, Total (g/dL)	7.8	6.2~8.0	

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
CHILUKURI	SIRI	FEMALE	1998-08-05	2101281007	01-29-2021

Thyroid	Current	Reference Range	Previous
Free T3 (pg/mL)	3.4	2.0~4.4	
Free T4 (ng/dL)	1.4	0.9~1.7	
TSH (μIU/mL)	3.990	0.111~4.910	
Anti-TPO (IU/mL)	12	≤34	
Reverse T3* (ng/dL)	22	7~23	
Anti-TG (IU/mL)	11.0	≤115.0	

Labnotes

Anti-TG :- Anti-Tg: The testing method used is an electrochemiluminescence immunoassay "ECLIA" performed on cobas e immunoassay analyzers. The measured anti-Tg value can vary depending on the testing procedure used. Anti-Tg values determined on patient samples by different testing procedures cannot be directly compared with one another and could be the cause of erroneous medical interpretations.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
CHILUKURI	SIRI	FEMALE	1998-08-05	2101281007	01-29-2021

Hormones	Current	Reference Range	Previous
Estradiol (pg/mL)	148.5		
FSH (mIU/mL)	2.2		
DHEA-S (µg/dL)	541.5 H	148.0~407.0	
LH (mIU/mL)	7.5		
SHBG (nmol/L)	20.0 L	24.6~122.0	
Cortisol (µg/dL)	12.8	A.M.: 6.2-19.4 P.M.: 2.3-11.9	
Testosterone, Total (ng/dL)	45.4	6.9~71.7	
Free Testosterone (ng/dL)	0.99 H	0.04~0.95	
Progesterone (ng/mL)	14.790		

Comments

DHEA-S: Treatment of underlying cause. In the case of an adrenal tumor, consider surgery, radiation, or chemotherapy. In cases of congenital adrenal hyperplasia or polycystic ovary syndrome, consider hormone therapy to stabilize the level of DHEA.

Estradiol	
Phase	Reference Range
FOLLICULAR	12.4 - 233 pg/mL
OVULATION	41.0 - 398 pg/mL
LUTEAL	22.3 - 341 pg/mL
Postmenopause	<5 - 138 pg/mL
PREGNANCY 1st trimester	154 - 3243 pg/mL
PREGNANCY 2nd trimester	1561 - 21280 pg/mL
PREGNANCY 3rd trimester	8525 - >30000 pg/mL

FSH	
Phase	Reference Range
FOLLICULAR	3.5 - 12.5 mIU/mL
OVULATION	4.7 - 21.5 mIU/mL
LUTEAL	1.7 - 7.7 mIU/mL
Postmenopause	25.8-134.8 mIU/mL

LH	
Phase	Reference Range
FOLLICULAR	2.4 - 12.6 mIU/mL
OVULATION	14-95.6 mIU/mL
LUTEAL	1 - 11.4 mIU/mL
Postmenopause	7.7-58.5 mIU/mL

Progesterone	
Phase	Reference Range
FOLLICULAR	0.057 - 0.893 ng/mL
OVULATION	0.121 - 12.0 ng/mL
LUTEAL	1.83 - 23.9 ng/mL
Postmenopause	0 - 0.126 ng/mL
Pregnant women (trimester)	
1st	11.0 - 44.3 ng/mL
2nd	25.4 - 83.3 ng/mL
3rd	58.7 - 214 ng/mL

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CBC w/ differential and Platelets	Current	Reference Range	Previous
WBC (x 10 ³ /μL)	9.26	3.98~10.04	
RBC (x 10 ⁶ /μL)	4.77	3.93~5.22	
Hemoglobin (g/dL)	13.7	11.2~15.7	
Hematocrit (%)	40.6	34.1~44.9	
MCV (x 10 ³ /μL)	85.1	79.4~94.8	
MCH (pg)	28.7	25.6~32.2	
MCHC (g/dL)	33.7	32.2~35.5	
Platelet Count (x 10 ³ /μL)	271.0	154.0~374.0	

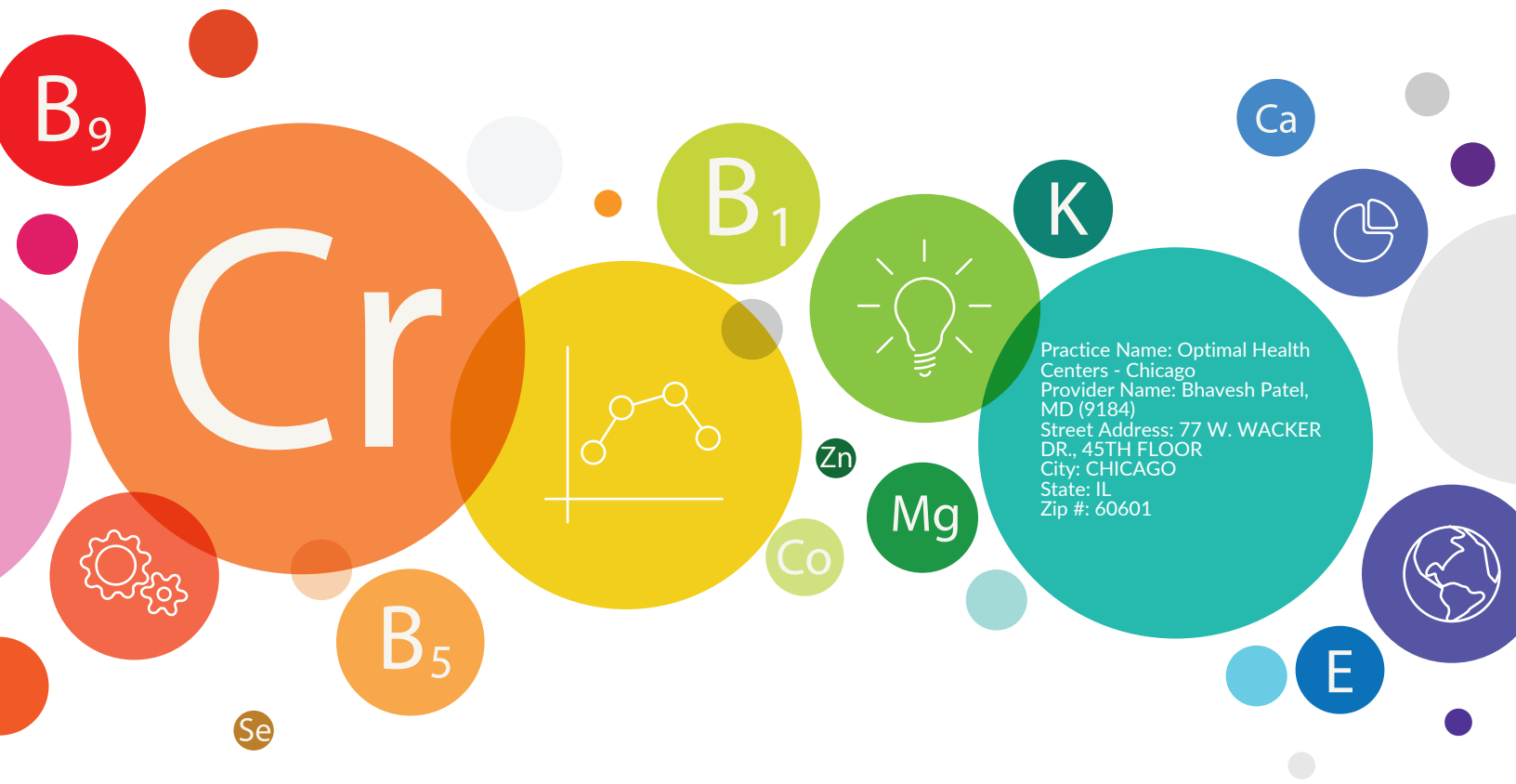
Other Markers	Current	Reference Range	Previous
COQ10-TOT* (μg/mL)	4.635 H	0.56~2.78	
Leptin (ng/mL)	14.5		

Leptin:

Your BMI is **27 kg/meters-squared**

Age	Body Mass Index (BMI)	Male	Female
Years	kg/meters-squared	ng/mL	ng/mL
5-9	All Ranges	1.1-16.8	
10-13	All Ranges	1.4-16.5	
14-17	All Ranges	1.1-24.9	
>17	18-25	1.1-13.4	4.7-23.7
	25-30	1.8-19.9	8.0-38.9

Body Mass Index (BMI) = (weight in Kg) / (height in metres)²



Practice Name: Optimal Health Centers - Chicago
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MICRONUTRIENT

Your guide to customized optimal nutrition.



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San Carlos, CA 94070

Final Report Date:	02-15-2021 04:23	Specimen Collected:	01-29-2021
Accession ID:	2101281007	Specimen Received:	01-30-2021 12:49

LAST NAME	FIRST NAME	MIDDLE NAME	DATE OF BIRTH	GENDER	PHYSICIAN ID
CHILUKURI	SIRI		1998-08-05	Female	9184

PATIENT

Name: SIRI CHILUKURI
Date of Birth: 1998-08-05
Gender: Female
Age: 22

Telephone #: 13122821803
Street Address: 310 E CULLERTON ST
City: CHICAGO
State: IL Zip #: 60616
Email: sirichilukuri@gmail.com

Fasting: FASTING No. of hours: 12.0
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PROVIDER

Practice Name: Optimal Health Centers - Chicago
Provider Name: Bhavesh Patel, MD (9184)
Phlebotomist: 433
Street Address: 77 W. WACKER DR., 45TH FLOOR
City: CHICAGO
State: IL
Zip #: 60601
Telephone #: +13122838002
Fax #: 3122838001

Vibrant America is pleased to present to you micronutrient testing that provides a comprehensive extracellular and intracellular assessment of the levels of the most important vitamins, minerals, antioxidants, fatty acids, and amino acids to help you make healthy lifestyle choices in consultation with your healthcare provider.

Testing Methodology: The blood sample is spun down so that the serum can be taken from the top and RBCs from the bottom. The remaining sample is processed to isolate PBMCs (Peripheral Blood Mononuclear cells). All three subsets are processed separately to isolate appropriate micronutrients for injection into mass-spectrometry. Micronutrients measured in RBCs include: folate, omega-3 and omega-6 fatty acids, and magnesium. Serum micronutrient measurements provide extracellular levels. WBC measurements are done and total WBC counts are taken on an automated cell counter. Intracellular WBC levels are normalized to the total WBC count in a patient's sample.

Interpretation of Report: The summary report provided lists the major categories under which the micronutrients are classified and gives a score for each category on a scale of 0-100. Please note that a micronutrient might be essential for more than one category. The contribution to the category score of each micronutrient is based on how important it is for the category based on literature references and the supporting evidence linking it to the respective category. A category score more than 85 is considered optimal, 40-85 considered moderate risk and below 40 is considered high risk. Complete micronutrient testing including serum, WBC and RBC needs to be ordered for the scores to populate.

The 'abnormal' section beneath each category score lists the micronutrients which are high/low for the category and the 'normal' section indicates the micronutrients which fall in-range. A suggestion table for suitable foods and space for supplement suggestions by your provider is found at the end of the summary page.

The test results of micronutrient levels are displayed in a graphical format for each Serum, WBC, and RBC levels as applicable. The graph has red and green background color to indicate whether the micronutrient is in-range or out of range. The reference ranges are also provided next to the graphs to help with the interpretation. A trendline of the micronutrient level for the respective patient will be available which will indicate the historical values along with current test results when multiple testing is performed on the patient.

The statements in this report have not been evaluated by the Food and Drug Administration. Please consult your physician/dietitian for medication, treatment, or life style management. This product is not intended to diagnose, treat, or cure any disease.

Please Note - It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your physician before making any changes.

MICRONUTRIENT



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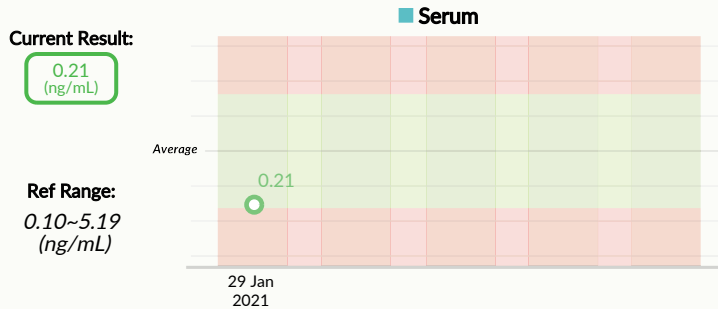
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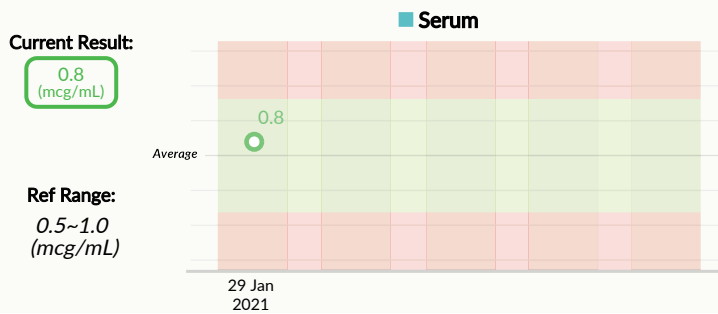
	Micronutrient	Serum			WBC			RBC		
		Current	Previous	Ref	Current	Previous	Ref	Current	Previous	Ref
Vitamins	Vitamin K2	0.21		0.10~5.19 (ng/mL)						
	Zinc	0.8		0.5~1.0 (mcg/mL)						
Minerals	Copper	0.9		0.6~1.8 (mcg/mL)						
	Copper to Zinc Ratio	1.1		0.9~2.6						

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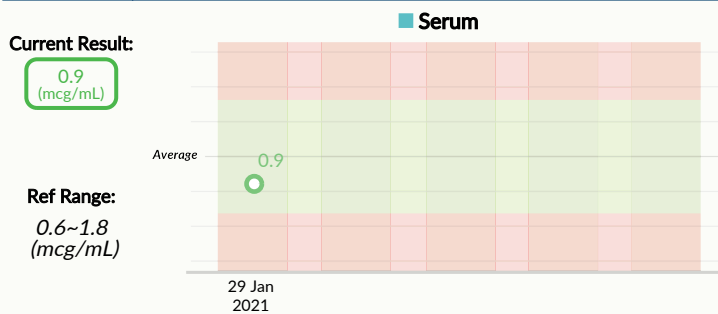
Vitamin K2



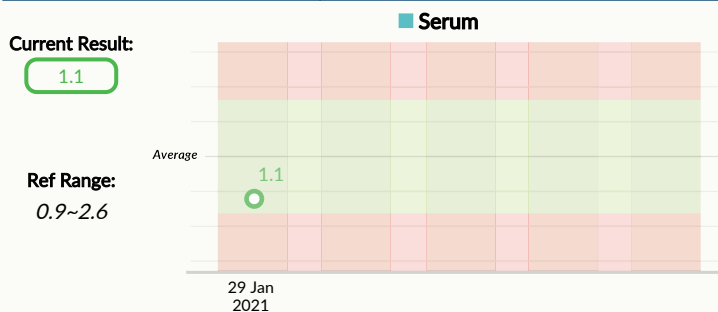
Zinc



Copper



Copper to Zinc Ratio



Key Terms/Glossary

AI

Adequate Intake. A nutrient measure used when RDA cannot be determined due to insufficient data. AIs are approximations of nutrient needs and based on average intake in a healthy population.

Antioxidant

A chemical compound that serves to quench free radicals and other reactive species produced by the process of oxidation, thereby reducing cellular protein damage, as well as inflammation.

Cofactor

A substance that is required for the activity of an enzyme or another protein in a biochemical reaction.

Conditionally Essential

Nutrients that become essential only in certain situations: stress, drug interactions, illness, aging, etc.

Enriched

Refers to refined cereal grains that have had nutrients added back after processing removes the bran and the germ layers. In the United States, enriched grains have the B vitamins (thiamin, riboflavin, niacin, folic acid) and iron added in. Fiber is not added back to enriched grains.

Essential

Refers to a nutrient that is required for life and body function that the body cannot synthesize (produce) on its own. For dietary vitamins, minerals, fatty acids, and amino acids, many, but not all, are essential.

RDA

Recommended Daily Allowance. The estimated amount of a nutrient or calories per day set by the Food and Nutrition Board of the National Research Council. RDA intake level for a particular nutrient that will meet the needs for healthy individuals. RDAs are usually determined for different groups (male, female, children, elderly, pregnant, lactating, etc.) RDAs were originally developed during World War II for soldiers' meal ratios with the intention to prevent frank nutrient deficiencies. They do not take into consideration interactions/depletions from medications or lifestyle factors.

Citations/Sources

- [1] ConsumerLab.com, 2017, <https://www.consumerlab.com/RDAs/>. Accessed 27 Sept. 2017.
- [2] Liska, Dan, David Jones, Robert Lerman, Jeffrey Bland, and Linda Costra. *Clinical Nutrition A Functional Approach*. 2nd ed., Gig Harbor, Washington, The Institute of Functional medicine, 2006.
- [3] Oregon State University, 2017, lpi.oregonstate.edu/mic. Accessed 27 Sept. 2017.
- [4] Houston, Mark C., and Stephen T. Sinatra. *Clinical Nutrition A Functional Approach*. CRC Press, 2015.



RISK AND LIMITATIONS

This test has been laboratory developed and its performance characteristics determined by Vibrant America LLC, a CLIA and CAP certified laboratory performing the test. The test has not been cleared or approved by the U.S. Food and Drug Administration (FDA). Although FDA does not currently clear or approve laboratory-developed tests in the U.S., certification of the laboratory is required under CLIA to ensure the quality and validity of the tests.

However, laboratory error can occur, which might lead to incorrect results. Some of them may include sample mislabeling or contamination, operational error, or failure to obtain data for certain micronutrients. Vibrant's laboratory may need a second sample to complete the testing. Vibrant America has effective procedures in place to protect against technical and operational problems; however, such problems may still occur. Examples include failure to obtain the result for a specific micronutrient due to circumstances beyond Vibrant's control. Vibrant may re-test a sample in order to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

All supplement and dietary suggestions for specific micronutrients must be evaluated and approved by your provider. Suggested Supplementation is based off references provided at the end of this report. Please see detailed explanation for each micronutrient and follow your ordering providers' recommendation before using this as a therapeutic intake.

A limitation of this testing is that most scientific studies have been performed in Caucasian populations only. The interpretations and recommendations are done in the context of Caucasian studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities. Please note that pediatric ranges have not been established for these tests. Interference studies have not been established for individuals on immunosuppressive drugs. Based on test results and other medical knowledge of the tested individual, health care providers might consider additional independent testing, or consult another health care provider.