MICRO.NUTRIENT

Driven *by Science*. Inspired *by You*.

Patient: **Doe, Jon**

Accession ID: 0000000000

Provider: Sample Provider, MD

Order Status: Complete

10401 Town Park Drive, Houston, TX 77072
1(800) 227-5227 | support@spectracell.com | www.spectracell.com

SpectraCell Laboratories
Science + Health + Solutions

PATIENT		SPECIMEN		PROVIDER	
NAME **Doe, Jon**	AGE **31**	ACCESSION ID **0000000000**	DATE COLLECTED **03/06/2019**	Account ID **00000000**	CLIENT NAME **Sample Provider, MD**
DOB **8/22/1987**	Gender **Male**	ORDER ID **0000-00000000000-000000**	DATE RECEIVED **03/07/2019**	Address **123 S. Any Street** **ANYWHERE, TX 77000**	
Patient ID **00-000-00000**			DATE REPORTED **03/23/2019**		

*Welcome to your Micronutrient Profile, **Jon**!*

Your body is unique and your story is too. Virtually all metabolic and developmental processes that take place in the body require micronutrients and strong evidence suggests that subtle vitamin, mineral, and antioxidant deficiencies can contribute to degenerative processes. These cellular deficiencies may suggest the underlying cause of a myriad of unwanted symptoms and, if corrected, can optimize physical and mental health performance.

The SpectraCell Advantage

Superior insights, earlier interventions, customized treament plans.

Functional

We measure the functional level and capability of nutrients present within your white blood cells, where metabolism takes place and where micronutrients do their job.

Long-term

This test measures intracellular micronutrient function over a period of 4-6 months, extending beyond static serum measurements.

Proprietary

Only SpectraCell offers the patented Spectrox® (reflects antioxidant capacity) and Immunidex (an overall measure of immune function).

What we measure:

We have measured the functional levels of 31 micronutrients, from vitamins and minerals to fatty acids and metabolites, as well as an overall measurement of antioxidant capacity and immune function to provide you with a powerful tool for optimal health, performance, and insight into any health condition. We provide your unique nutrient status in the following areas:

VITAMINS & MINERALS
Discover your body's unique vitamin and mineral requirements and the disparities that exist within your makeup.

AMINO ACIDS
Learn how well your amino acids, the building block of protein, are functioning within your cells.

ENERGY, FAT AND METABOLISM
Know how well your body is metabolizing micronutrients for energy production.

ANTIOXIDANT STATUS & IMMUNE FUNCTION
Understand your body's ability to manage oxidative stress and your immune response to infections and disease.

PATIENT: **Doe, Jon** PROVIDER: **Sample Provider, MD** DATE REPORTED: **03/23/2019** ACCESSION ID: **0000000000**

Results **At-A-Glance**

Functional Deficiencies

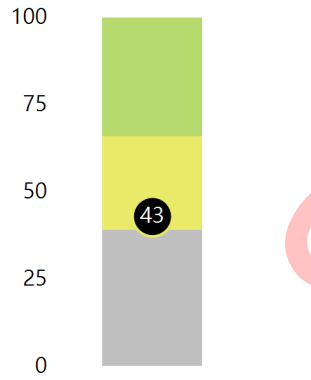
Abnormal	Suggested Supplementation *	Provider Comments
Chromium	200 mcg daily of chromium nicotinate or glycinate for 90 days	
Glucose-Insulin	Replace foods with high glycemic index (sugar, white flour) with whole foods (fruit, vegetables, and whole grains).	
Glutathione	600 mg b.i.d. (1200 mg daily) of N-Acetylcysteine (NAC) Take each dose with a meal	
Immunidex	Address individual micronutrient deficiencies.	
Vitamin B1	50 mg daily	
Vitamin B3	100 mg b.i.d. (200 mg daily) of Niacin	

* The RDA (Recommended Daily Allowance) was first published in 1968 primarily for use in nutritional labeling of packaged foods. The DRI (Dietary Reference Intake), published in 1997, serves as replacements for the former RDA, although the actual values are generally within an order of magnitude, and are also primarily for use in nutritional labeling and fortification of packaged foods. In most cases, neither the RDA nor the DRI will be adequate to replete a nutrient in people who demonstrate a functional cellular deficiency of said nutrient. An evidence based approach was used to develop clinically relevant repletion recommendations, consisting of data from published studies and clinician expertise. However, the information presented is not intended nor implied to be a substitute for professional medical advice, diagnosis or treatment.

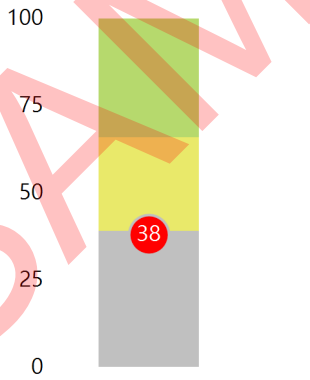
Borderline Deficiencies

Borderline	Provider Comments
Copper	
Glutamine	
Magnesium	
Vitamin A	
Vitamin B2	

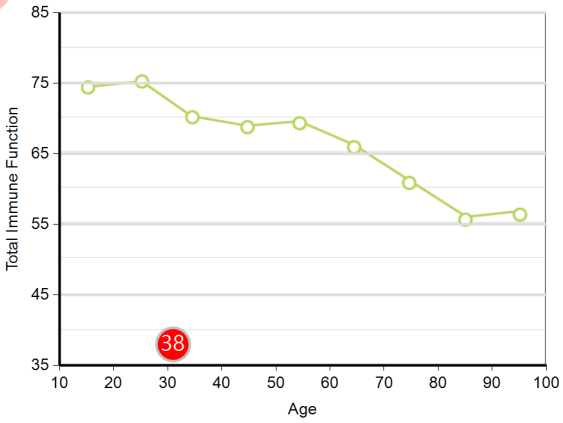
Spectrox®
Total Antioxidant Function



Immunidex
Total Immune Function



Total Immune Function vs Age



Deficient
Values in this range indicate a poor growth response. Cell function is compromised and likely requires nutrient repletion.

Average
Values in this range indicate an average growth response. Cell function is not yet optimal and may require nutrient repletion.

Strong
Values in the range indicate a stronger than average growth response. Cells are functioning well.

Spectrox®

Total Antioxidant Function is a measurement of overall antioxidant function. The patient's cells are oxidatively challenged and the cells' ability to resist damage is determined.

Immunidex

Total Immune Function is an indication of how well a person's T-lymphocytes are functioning by measuring their response to mitogen stimulation (ability to grow). Since lymphocyte function is widely considered a systemic measure of general health, a healthy (stronger) response is desired. A less-than-optimal response may improve with nutrient repletion.

SpectraCell Laboratories
Science + Health + Solutions

10401 Town Park Drive, Houston, TX 77072
1(800) 227-5227 | support@spectracell.com | www.spectracell.com

PATIENT: **Doe, Jon** PROVIDER: **Sample Provider, MD** DATE REPORTED: **03/23/2019** ACCESSION ID: **0000000000**

Micronutrients	Patient Results	Reference Range	Patient Result	Interpretation
B-VITAMINS				
Vitamin B1		>>78%	73	Deficient
Vitamin B2		>>53%	56	Borderline
Vitamin B3		>>80%	75	Deficient
Vitamin B6		>>54%	70	
Vitamin B12		>>14%	20	
Folate		>>32%	50	
Pantothenate		>>7%	27	
Biotin		>>34%	45	
AMINO ACIDS AND METABOLITES				
Serine		>>30%	37	
Glutamine		>>37%	41	Borderline
Asparagine		>>39%	51	
Choline		>>20%	30	
Inositol		>>58%	73	
Carnitine		>>46%	59	
Oleic Acid		>>65%	72	
OTHER VITAMINS & MINERALS				
Vitamin D3		>>50%	67	
Vitamin A		>>70%	72	Borderline
Vitamin K2		>31-85%	70	
Manganese		>>50%	77	
Calcium		>>38%	48	
Zinc		>>37%	50	
Copper		>>42%	44	Borderline
Magnesium		>>37%	39	Borderline
CARBOHYDRATE METABOLISM				
Fructose Sensitivity		>>34%	45	
Glucose-Insulin Interaction		>>39	33	Deficient
Chromium		>>40%	34	Deficient
ANTIOXIDANTS				
Glutathione		>>42%	34	Deficient
Cysteine		>>41%	57	
Coenzyme Q10		>>86%	97	
Selenium		>>74%	80	
Vitamin E		>>84%	92	
Alpha Lipoic Acid		>>81%	90	
Vitamin C		>>40%	73	

The reference ranges listed in the above table are valid for male and female patients 12 years of age or older.

Deficient
Values in this area represent a deficiency and may require nutrient repletion or dietary changes

Borderline
Values in this area represent a borderline deficiency and may indicate a need for nutrient repletion or dietary changes

Normal
Values in this area represent a normal result

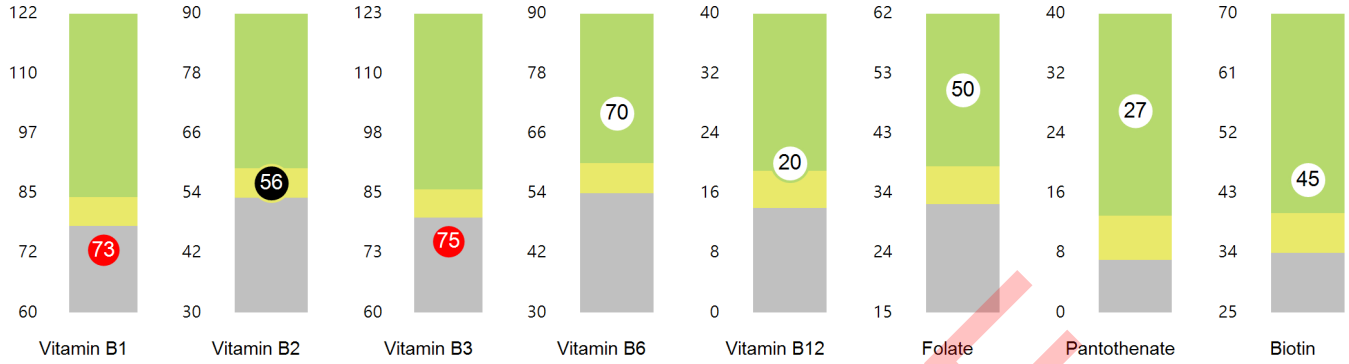
PATIENT: **Doe, Jon** PROVIDER: **Sample Provider, MD** DATE REPORTED: **03/23/2019** ACCESSION ID: **0000000000**

Deficient
Values in this area represent a deficiency and may require nutrient repletion or dietary changes

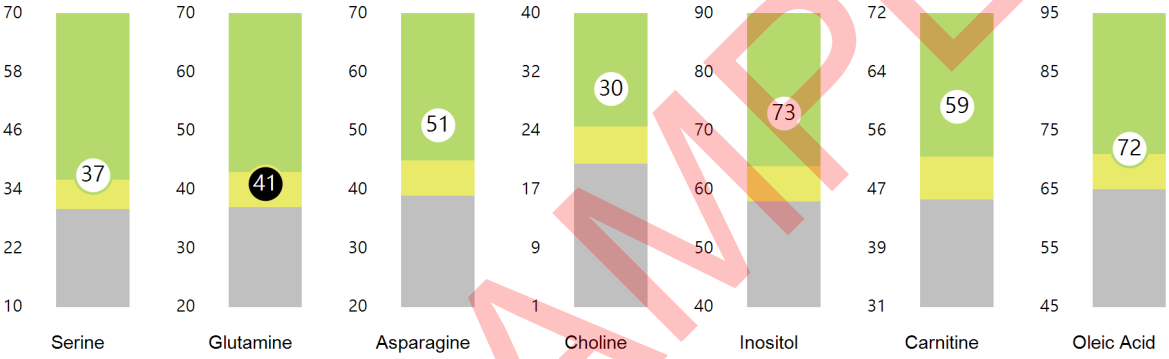
Borderline
Values in this area represent a borderline deficiency and may indicate a need for nutrient repletion or dietary changes

Normal
Values in this area represent a normal result

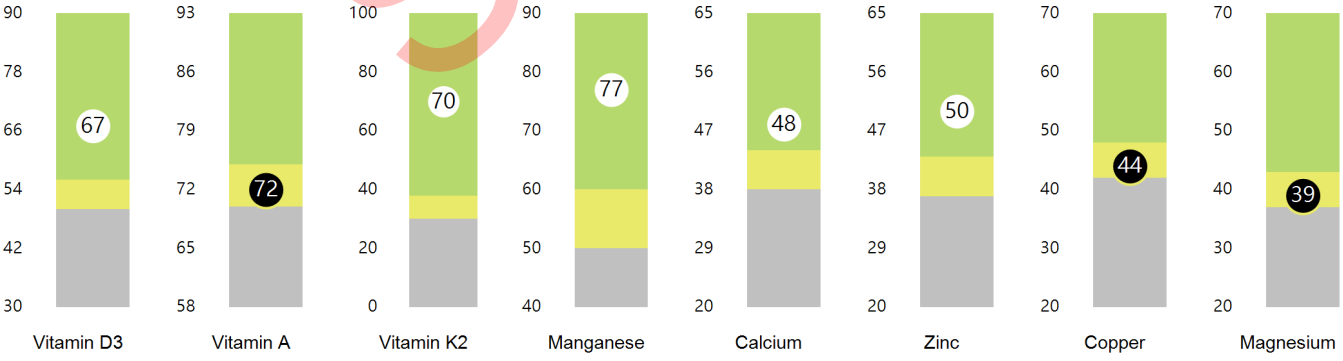
B-Complex Vitamins



Amino Acids & Metabolites



Other Vitamins & Minerals



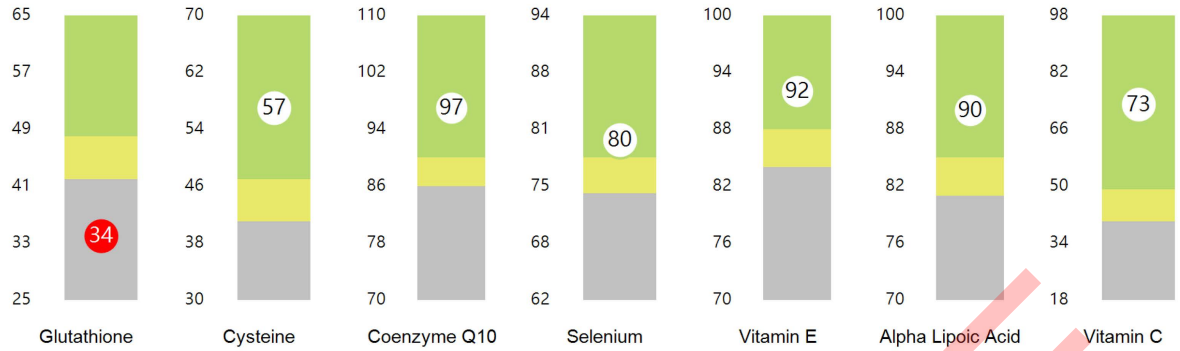
PATIENT: **Doe, Jon** PROVIDER: **Sample Provider, MD** DATE REPORTED: **03/23/2019** ACCESSION ID: **0000000000**

Deficient
Values in this area represent a deficiency and may require nutrient repletion or dietary changes

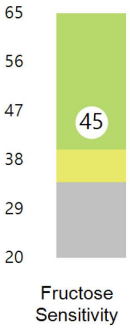
Borderline
Values in this area represent a borderline deficiency and may indicate a need for nutrient repletion or dietary changes

Normal
Values in this area represent a normal result

Individual Antioxidants

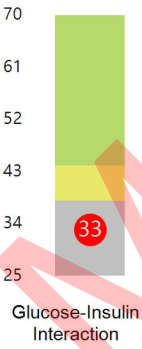


Carbohydrate Metabolism



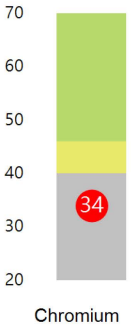
Fructose Sensitivity

This assay measures changes in the patient's lymphocyte growth response to a fructose challenge. Significant reduction in cell growth capacity is indicative of poor ability to metabolize fructose. This can be due to nutritional deficiencies of necessary cofactors in the fructose metabolizing pathway (e.g. copper, zinc) or may be due to genetic factors.



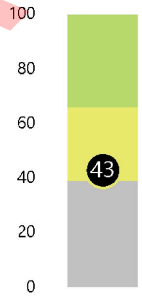
Glucose-Insulin Interaction

The patient's cells are challenged with glucose and their ability to grow in the presence or absence of insulin is determined. A significant decrease of cell growth is indicative of reduced ability to metabolize glucose.



Spectrox® - Total Antioxidant Function

Total Antioxidant Function is a measurement of overall antioxidant function. The patient's cells are oxidatively challenged and the cells' ability to resist damage is determined.



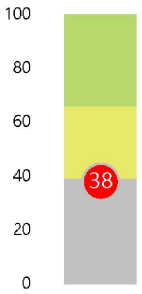
Total Antioxidant Function value above 65%
indicates a desirable status. Since antioxidants are protective nutrients, higher antioxidant function is desirable because it increase cells' ability to resist oxidative stress.

Total Antioxidant Function value between 40%-65%
indicates an average ability to resist oxidative stress.

Total Antioxidant Function value below 40%
indicates poor antioxidant function resulting in reduced ability to resist oxidative stress.

Immunidex - Total Immune Function

Total Immune Function is an indication of how well a person's T-lymphocytes are functioning by measuring their response to mitogen stimulation (ability to grow). Since lymphocyte function is widely considered a systemic measure of general health, a healthy (stronger) response is desired. A less-than-optimal response may improve with nutrient repletion.



Total Immune Function value above 65%
indicates a strong (healthy) cell-mediated immune response.

Total Immune Function value between 40% and 65%
indicates an average response.

Total Immune Function value below 40%
may indicate a weakened cell-mediated immune response.

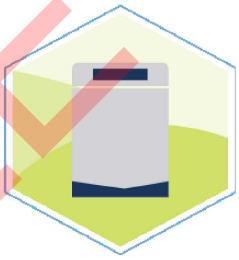
Overview of Test Methodology

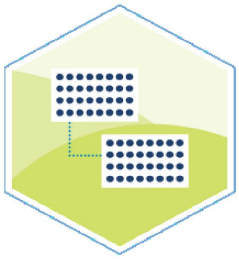
Cellular Function = Performance, Not Just Potential

Lymphocyte Proliferation Assay

1 ISOLATION
Lymphocytes are purified, washed, counted, and plated.

2 INCUBATION
Cells are incubated for 5 days in a defined culture medium containing optimal levels of all essential nutrients necessary to sustain their growth.





3 LABELING
The mitogen stimulated cells' growth are measured by the incorporation of radioactive thymidine.

4 HARVEST & COUNTING
Cells are harvested onto filter paper and counted.

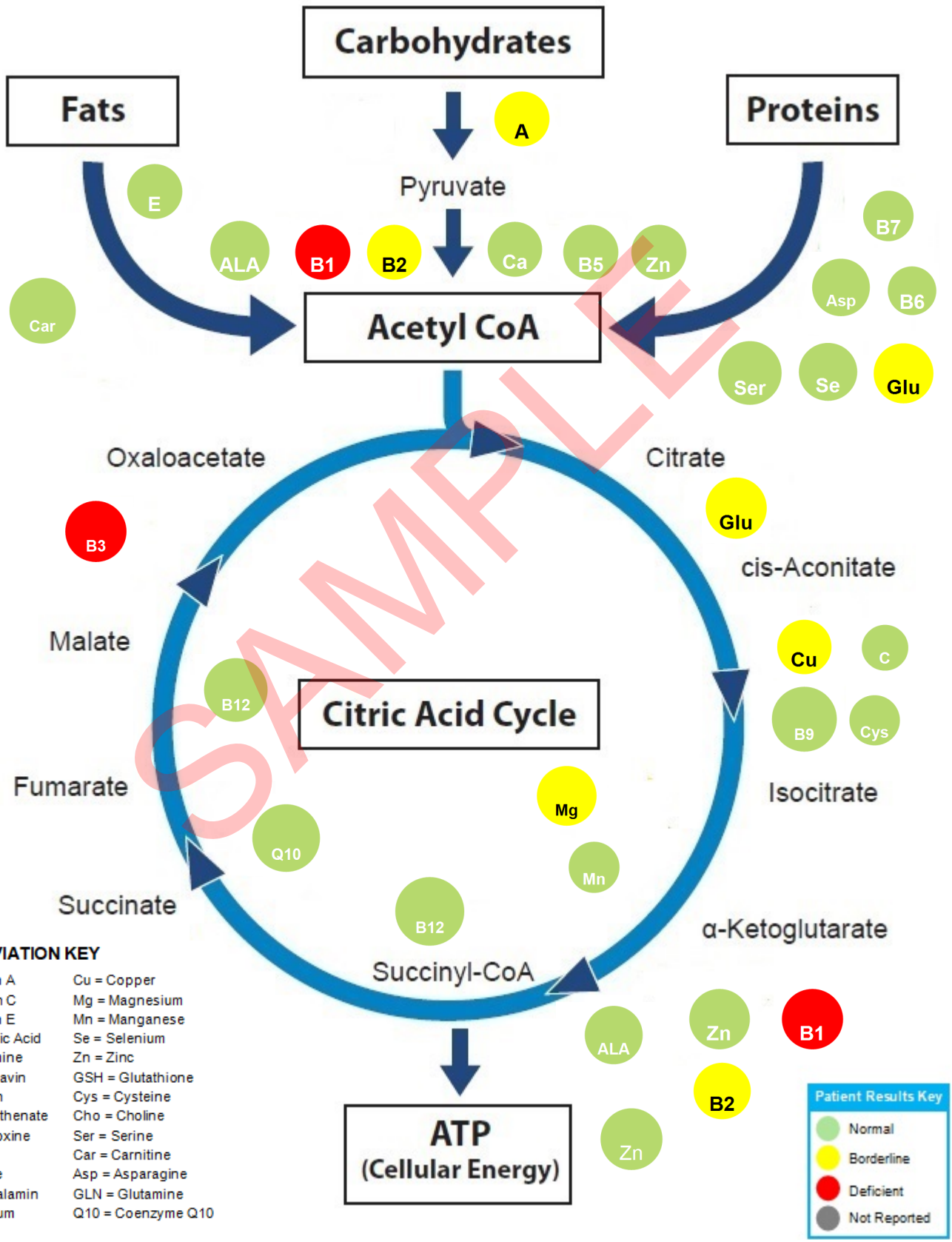
5 DATA PROCESSING
Data is reviewed, approved, and released to reporting.

Routine turnaround time for the Micronutrient assay is 10-14 business days.

PATIENT: **Doe, Jon** PROVIDER: **Sample Provider, MD** DATE REPORTED: **03/23/2019** ACCESSION ID: **0000000000**

Krebs Cycle

Energy Production



ABBREVIATION KEY

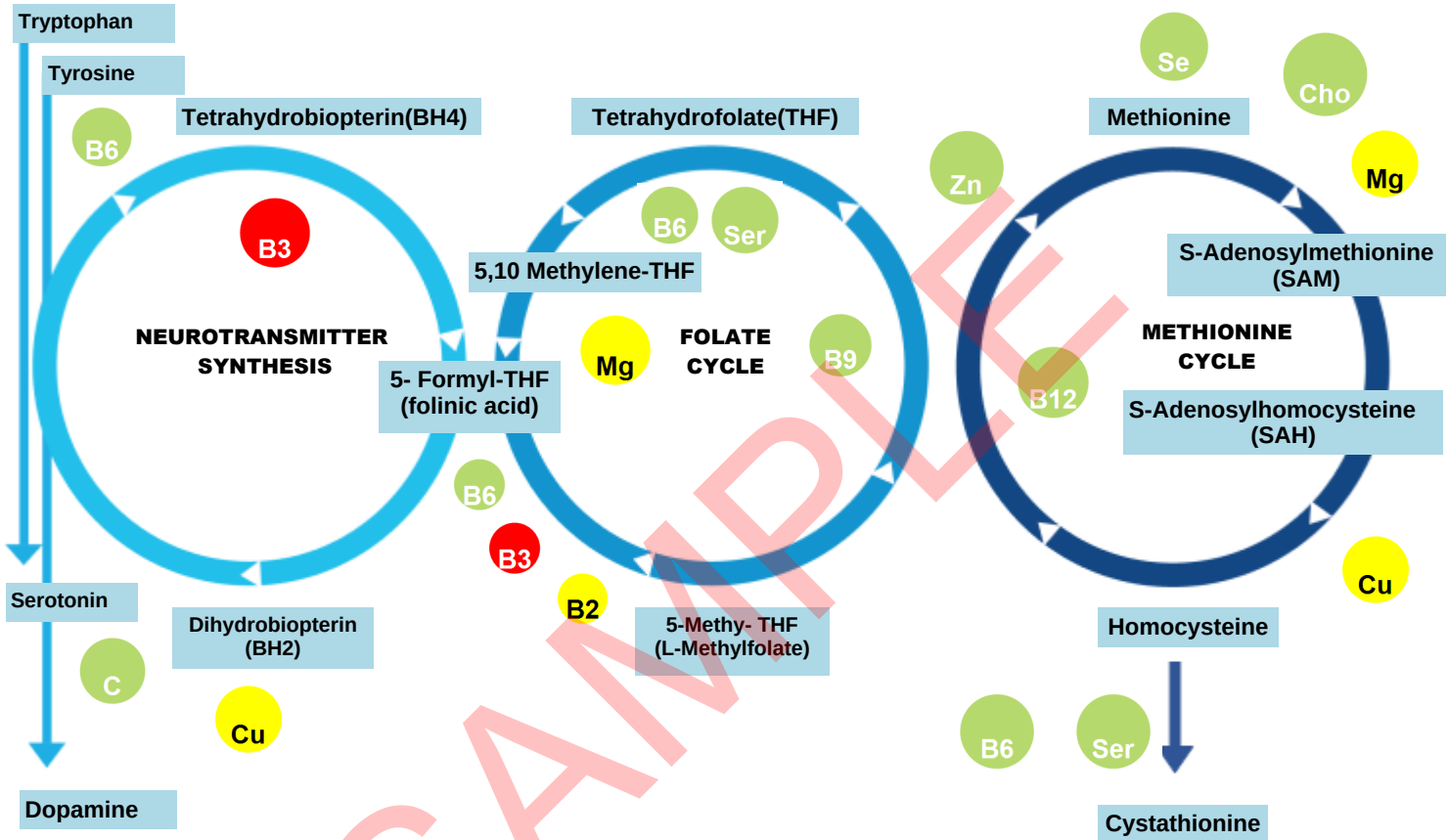
A = Vitamin A	Cu = Copper
C = Vitamin C	Mg = Magnesium
E = Vitamin E	Mn = Manganese
ALA = Lipoic Acid	Se = Selenium
B1 = Thiamine	Zn = Zinc
B2 = Riboflavin	GSH = Glutathione
B3 = Niacin	Cys = Cysteine
B5 = Pantothenate	Cho = Choline
B6 = Pyridoxine	Ser = Serine
B7 = Biotin	Car = Carnitine
B9 = Folate	Asp = Asparagine
B12 = Cobalamin	GLN = Glutamine
Ca = Calcium	Q10 = Coenzyme Q10

10401 Town Park Drive, Houston, TX 77072
1(800) 227-5227 | support@spectracell.com | www.spectracell.com

PATIENT: **Doe, Jon** PROVIDER: **Sample Provider, MD** DATE REPORTED: **03/23/2019** ACCESSION ID: **0000000000**

Methylation Cycle

Detoxification, Cellular Adaptability, Gene Regulation



ABBREVIATION KEY

A = Vitamin A	Cu = Copper
C = Vitamin C	Mg = Magnesium
E = Vitamin E	Mn = Manganese
ALA = Lipoic Acid	Se = Selenium
B1 = Thiamine	Zn = Zinc
B2 = Riboflavin	GSH = Glutathione
B3 = Niacin	Cys = Cysteine
B5 = Pantothenate	Cho = Choline
B6 = Pyridoxine	Ser = Serine
B7 = Biotin	Car = Carnitine
B9 = Folate	Asp = Asparagine
B12 = Cobalamin	GLN = Glutamine
Ca = Calcium	Q10 = Coenzyme Q10

Patient Results Key

- Normal
- Borderline
- Deficient
- Not Reported