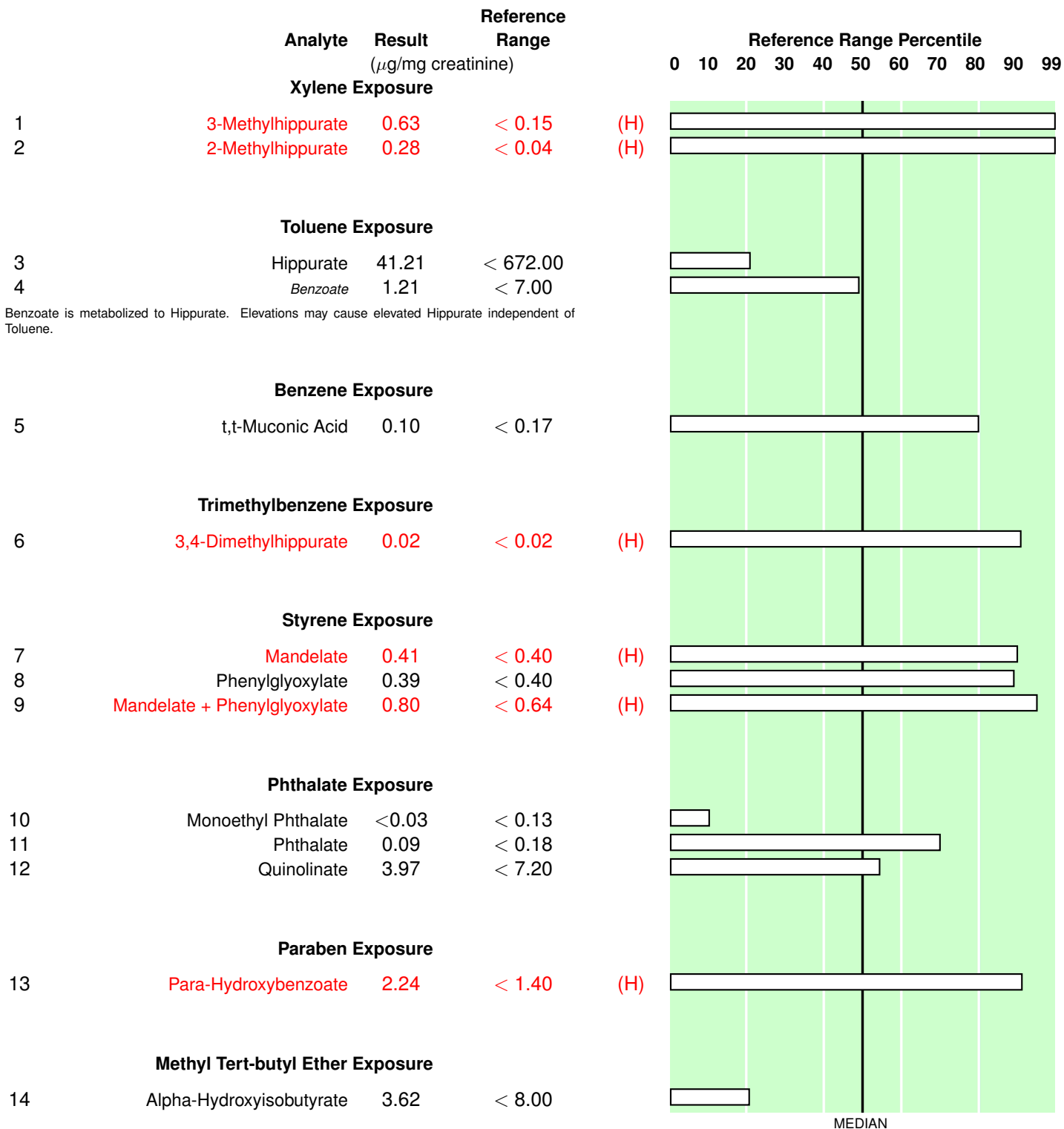


Physician:
Patient: Sample Report
Accession: 2019XXXXXX

Sex: F **Collected:** 05/23/2019
Age: 39 **Received:** 05/30/2019
Sample Type: Dried Urine **Completed:** 06/11/2019



Reference range updated 2/01/2018. Reference range is not gender adjusted. Reference range is age adjusted for children.

Method: LC/MS/MS

This test is not intended to diagnose, treat, cure, or prevent any disease or replace the medical advice and/or treatment obtained from a qualified healthcare practitioner. US BioTek Laboratories, Inc. has developed and determined the performance characteristic of this test under the Clinical Laboratory Improvement Amendments (CLIA). This test has not been evaluated by the U.S. Food and Drug Administration and is considered for investigational and research purposes only. This test does not assess for neonatal inborn errors of metabolism and is based on stable renal function and normal renal clearance.

The analytes on the panel are subject to change without prior notice.

Lactate is reported as D- and L-Lactate combined on UMP.

CLIA : 50D0965661 COLA accredited

http://www.usbiotek.com/



Lab Interpretation, LLC
18124 Wedge Pkwy, Ste 432
Reno, NV 89511

(775) 851-3337
(775) 851-3363 Fax
www.labinterpretation.com

Sample Report

Date: 5/23/2019
(Accession #2019XXXXX)

Next Test Due: 8/22/2019

LabAssist™ Environmental Pollutants Exposure Report

Practitioner

The information contained in this report is for the exclusive use of addressee and contains confidential, privileged and non-disclosable information. If the recipient of this report is not the addressee or the person responsible for delivering the message to the addressee, such recipient is prohibited from reading or using this message in any way and such recipient is further notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify us immediately by telephone collect and return the original report to us at the address below via the U.S. Postal Service. We will reimburse you for postage. Thank you.

Basic Status High/Low

Sample Report
 Female / Age: 39
 Client ID: (50651)

Environmental Pollutants Exposure Date: 5/23/2019

The % Status is the weighted deviation of the laboratory result.

Low Results

-80	-60	-40	-20	0						
		-43.87			Hippurate	-43.87	L	41.20	0.00	672.00
		-42.31			Monoethyl Phthalate	-42.31	L	0.01	0.00	0.13
		-32.71			Benzoate	-32.71	L	1.21	0.00	7.00

-25%

High Results

-50	0	50	100	150						
		650.00			2-Methylhippurate	650.00	H	0.28	0.00	0.04
		370.00			3-Methylhippurate	370.00	H	0.63	0.00	0.15
		110.00			p-Hydroxybenzoate	110.00	H	2.24	0.00	1.40
		75.00			M + P	75.00	H	0.80	0.00	0.64
		52.50			Mandelate	52.50	H	0.41	0.00	0.40
		50.00			3,4-Dimethylhippurate	50.00	H	0.02	0.00	0.02
		47.50			Phenylglyoxylate	47.50	H	0.39	0.00	0.40

-25%

25%

Basic Status Alphabetic

Sample Report
Female / Age: 39

Environmental Pollutants Exposure Date: 5/23/2019

The % Status is the weighted deviation of the laboratory result relative to the range.

-100	-50	0	50	100	% Status	Result	Low	High
					2-Methylhippurate	650.00 H	0.28	0.00 0.04
					3,4-Dimethylhippurate	50.00 H	0.02	0.00 0.02
					3-Methylhippurate	370.00 H	0.63	0.00 0.15
					a-Hydroxyisobutyrate	-4.75	3.62	0.00 8.00
					Benzoate	-32.71 L	1.21	0.00 7.00
					Hippurate	-43.87 L	41.20	0.00 672.00
					M + P	75.00 H	0.80	0.00 0.64
					Mandelate	52.50 H	0.41	0.00 0.40
					Monoethyl Phthalate	-42.31 L	0.01	0.00 0.13
					Phenylglyoxylate	47.50 H	0.39	0.00 0.40
					Phthalate	0.00	0.09	0.00 0.18
					p-Hydroxybenzoate	110.00 H	2.24	0.00 1.40
					Quinolate	5.56	4.00	0.00 7.20
					t,t-Muconic Acid	8.82	0.10	0.00 0.17
	-25%	25%			Total Status Deviation	106.64		
					Total Status Skew	88.98		

Client Summary Review

Sample Report
Female / Age: 39

Environmental Pollutants Exposure Date: 5/23/2019

Nutritional Support

The following supplements may help to balance your biochemistry. Consult your practitioner.

1-Paraben Detox Protocol
See Nutrition Detail

1-Styrene Detoxification Protocol
See Nutrition Detail

1-Trimethylbenzene Detoxification
See Nutrition Detail

1-Xylene Detoxification Protocol
See Nutrition Detail

Practitioner Summary Review

Sample Report
Female / Age: 39

Environmental Pollutants Exposure Date: 5/23/2019

Out-Of-Balance Panel Values

The following panels have a PSD of greater than 25% indicating need for further review. PSD is the Panel Status Deviation, or the average imbalance of that subset of results. The PSS is the Panel Status Skew, or the direction, negative (deficiency) or positive (excess), of that subset of results.

Panel Name	PSD	PSS
Automotive Sources	172.65%	171.30%
Paint and Solvents	136.25%	136.25%
Water Sources	126.94%	125.58%
Plastic Sources	43.46%	26.54%
Personal Care Products	40.28%	19.13%

Lab Reported out-of-range Values

The following results are out-of-range (as reported by the lab), and should be carefully reviewed.

2-Methylhippurate (650.00%)

This elevated organic acid is an indication of exposure to or xylene or toluene. A comprehensive detoxification program should be undertaken to help the body excrete these petrochemicals. The use of antioxidants and glycine are recommended. Xylene may cause problems with the central nervous system. This effect will impair performance and affect cerebral function. Other symptoms are erythema, defatting dermatitis, conjunctivitis, renal damage, and paresthesias of the extremities. Xylene has also been suggested as causing mild hematopoietic system toxicity in experimental animals. Research suggests that this petrochemical is metabolized at a half-life rate of approximately 25 hours. The balance of the exposure is metabolized by the oxidation of a methyl group to toluic acid. The toluic acid is converted to methylhippuric acid through conjugation with glycine and excreted in the urine.

3-Methylhippurate (370.00%)

This metabolic byproduct of the excretion of xylene may indicate of exposure to this prevalent solvent. A comprehensive detoxification program should be undertaken to help the body excrete these petrochemicals. The use of antioxidants and glycine are recommended. Xylene may cause problems with the central nervous system. This effect will impair performance and affect cerebral function. Other symptoms are erythema, defatting dermatitis, conjunctivitis, renal damage, and paresthesias of the extremities.

Xylene has also been suggested as causing mild hematopoietic system toxicity in experimental animals. Research suggests that this petrochemical is metabolized at a half-life rate of approximately 25 hours. The balance of the exposure is metabolized by the oxidation of a methyl group to toluic acid. The toluic acid is converted to methylhippuric acid through conjugation with glycine and excreted in the urine.

p-Hydroxybenzoate (110.00%)

High levels of p-hydroxybenzoate has been suggested to be a metabolite of bacterial action on tyrosine, it is more likely to be a metabolite of paraben exposure. Parabens are common additives to foods and cosmetics.

M + P (75.00%)

Mandelate and Phenylglyoxalate individually are not as specific for styrene exposure as when the two combined are elevated. A high M + P level is a good marker for styrene exposure.

Mandelate (52.50%)

Mandelic acid, along with phenylglyoxylate is a marker for styrene exposure. Primarily used in packaging, this petrochemical is made from a combination of benzene and ethylene. Styrene is also found in cigarette smoke making smokers more likely to suffer side-effects.

Some health effects include dizziness, lightheadedness, headache, drowsiness, nausea, impaired balance and manual dexterity along with difficulty concentrating and poor reaction time. Irritation of mucous membranes, dermatitis, nausea and fatigue are other potential effects of styrene exposure. Styrene is also known to be genotoxic and hepatotoxic. It has been suggested that this toxin may also increase the risk for a number of cancers including leukemia. In animal models, low levels can be extremely hepatotoxic to some while not to others. This suggests a genetic component to styrene excretion.

To help the body excrete styrene it is suggested that boosting glutathione levels may be helpful as styrene oxides conjugate with this tripeptide.

3,4-Dimethylhippurate (50.00%)

3,4-Dimethylhippurate is a marker for exposure to trimethylbenzene a common solvent found in paint thinners, dry cleaning, pesticides, inks, asphalt, lacquers, varnishes, dyes and many other petrochemical based products. Some health effects include dizziness, headache, anxiety, nausea, blurred vision, abdominal pains along with difficulty concentrating and irritability. Irritation of mucous membranes, dermatitis, nervousness and fatigue are other potential effects of trimethylbenzene exposure.

This toxin is also known to be carcinogenic and hepatotoxic.

In order to help the body excrete trimethylbenzene it is suggested to increase intake of glycine and sulfur bearing amino acids such as N-acetyl-cysteine and taurine. This, along with an increased fluid intake is necessary to help the body excrete this toxin. The use of saunas as well as exercise may also be beneficial in some people to excrete solvents from adipose tissue.

Nutrition - Detail

Sample Report
Female / Age: 39

Environmental Pollutants Exposure Date: 5/23/2019

Nutritional and herbal information contained in this report is based upon research related to imbalances in your chemistry. The recommendations are based upon the information provided, without interpretation. This must be done with the help of your qualified health care professional.

1-Paraben Detox Protocol See Nutrition Detail

Parabens are a ubiquitous chemical found in foods as well as many cosmetics. While small doses are seemingly safe, it is the constant exposure that causes some people with an inability to excrete their daily intake of this chemical, health problems. The following protocol should help increase excretion of parabens.

Adults:

Vitamin C - 500 mg 2x daily

Forskolin - 2x daily

Milk Thistle - 2x daily

Balanced Electrolyte - 1 tablespoon 2-3x daily

Amino Acid Complex with Glycine - 5-10 grams daily

Children:

Vitamin C - 250 mg 2x daily

Milk Thistle - 1x daily

Balanced Electrolyte - 1 teaspoon 2x daily

Amino Acid Complex with Glycine - 3-6 grams daily.

Decreased

Rationale

Normal

Increased

p-Hydroxybenzoate

1-Styrene Detoxification Protocol See Nutrition Detail

Styrene detoxification requires an increased level of glutathione. In order to effectively increase glutathione levels it is necessary to supply both the necessary amino acids (cysteine, glutamic acid and glycine) as well as the nutrients (pyridoxine, riboflavin and folic acid) to make the conversion.

Adult

Broad Spectrum Amino Acid - 5-10 grams daily

Glycine - 500 mg twice daily

N-acetyl-cysteine - 500 mg twice daily

B-complex - twice daily

Vitamin E - 400 IU once daily (mixed tocopherols)

Vitamin C - 500 mg twice daily

Selenium - 200 mcg once daily

Children

Broad Spectrum Amino Acid - 2 grams daily

Glycine - 250 mg twice daily

N-acetyl-cysteine - 250 mg once daily

B-complex - 1 time daily

Vitamin E - 200 IU once daily (mixed tocopherols)

Vitamin C - 500 mg 1 time daily

Decreased

Normal

Increased

M + P

Mandelate

Phenylglyoxylate

1-Trimethylbenzene Detoxification See Nutrition Detail

This solvent is used in the manufacturing of paint thinners, perfumes, dyes, and as a motor fuel additive.

Adults

Glycine 500 mg twice daily

Increased fluid intake, preferably with added electrolytes

Broad Spectrum Antioxidants - twice daily

Children

Glycine 250 mg twice daily

Increased fluid intake, preferably with added electrolytes

Broad Spectrum Antioxidants - once daily

Decreased

Normal

Increased

3,4-Dimethylhippurate

Nutrition - Detail

Sample Report
Female / Age: 39

Environmental Pollutants Exposure Date: 5/23/2019

Nutritional and herbal information contained in this report is based upon research related to imbalances in your chemistry. The recommendations are based upon the information provided, without interpretation. This must be done with the help of your qualified health care professional.

1-Xylene Detoxification Protocol See Nutrition Detail

Xylene, a ubiquitous petrochemical solvent, is first oxidized via p450 enzymes then conjugated with glycine to form 2- and 3-methylhippurate.

The following nutritional support is recommended to help with the excretion of this toxin.

Adults

Glycine - 500 mg 2 - 3 times daily

Increased fluid intake, preferably with added electrolytes

Broad Spectrum Antioxidants - 2 - 3 times daily

Children

Glycine 250 mg 2 times daily

Broad Spectrum Antioxidants - 1 time daily

make sure the antioxidants include Vitamins C, E and Selenium

Decreased

Rationale

Normal

Increased

3-Methylhippurate

2-Methylhippurate

Drug Interactions

Sample Report
Female / Age: 39

Environmental Pollutants Exposure Date: 5/23/2019

Drugs listed below tend to further aggravate elements of blood chemistry that are out of range (H or L). The (#) after each drug denotes the number of times that drug is flagged as being potentially harmful.

Panel/Subset Report

Sample Report
Female / Age: 39

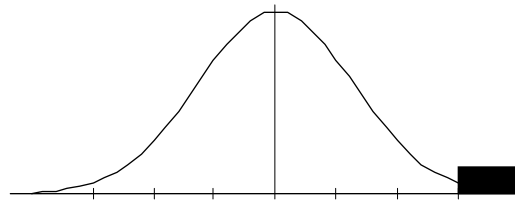
Environmental Pollutants Exposure Date: 5/23/2019

Automotive Sources

2-Methylhippurate[H], 3-Methylhippurate[H], Mandelate[H],
Phenylglyoxylate[H], M + P[H], t,t-Muconic Acid,
a-Hydroxyisobutyrate.

PSD: 172.65
PSS: 171.30

This panel ascertains the level of automotive-sourced toxins within your cells. The leading source is car exhaust. Other sources include: jogging on busy streets next to traffic, commuting in heavy traffic, and living in large urban areas. This profile may indicate a high level of intracellular toxins. Strongly consider an appropriate detoxification protocol.

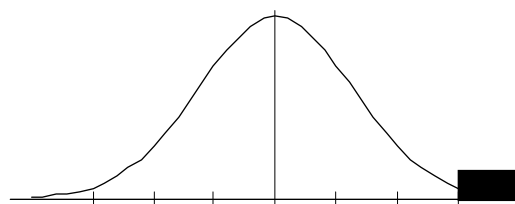


Paint and Solvents

3-Methylhippurate[H], Mandelate[H], Phenylglyoxylate[H], M + P[H].

PSD: 136.25
PSS: 136.25

This panel ascertains the level of paint and solvent toxins within your cells. Paints and solvents are often found with styrene and xylene. Airing out a newly painted house is advisable. When using paints and solvents, always ensure the work space is well-ventilated and wear an appropriate mask. This profile likely indicates a high level of paint and solvent toxins within your cells. Strongly consider an appropriate detoxification protocol.

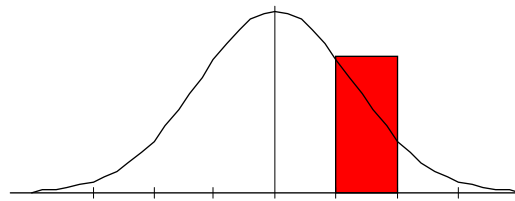


Personal Care Products

Phthalate, Monoethyl Phthalate[L], p-Hydroxybenzoate[H], t,t-Muconic Acid.

PSD: 40.28
PSS: 19.13

This panel ascertains the intracellular toxins from cosmetic sources. Common toxins include: parabens, phthalates and benzene derivatives. To learn more about this topic, visit the Environmental Working Group, (www.ewg.org) and read their report "Skin Deep." This profile likely indicates high cosmetic toxin levels within your cells. Strongly consider appropriate detoxification protocol.

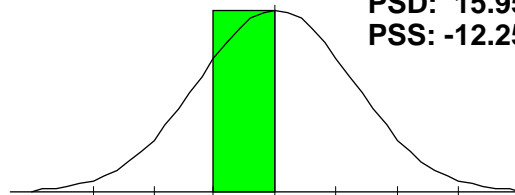


Phthalates

Phthalate, Monoethyl Phthalate[L], Quinolinat.

PSD: 15.95
PSS: -12.25

Phthalates are a commonly found in everyday things including: plastic items, scented items like air fresheners & candles, and personal care products. Phthalates disrupt the endocrine system and lowers testosterone in fetuses. This profile shows a percent imbalance below 25%, so no abnormalities were found.



Panel/Subset Report

Sample Report
Female / Age: 39

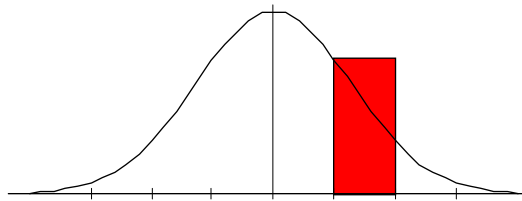
Environmental Pollutants Exposure Date: 5/23/2019

Plastic Sources

Phthalate, Monoethyl Phthalate[L], Mandelate[H],
Phenylglyoxylate[H], M + P[H].

PSD: 43.46
PSS: 26.54

Plastics are made with styrene and phthalates. This panel ascertains the level of intracellular toxins sourced from plastics. Common sources include: microwaving in plastic containers, drinking from plastic bottles, drinking hot liquids from styrofoam cups, etc. This profile likely indicates a high level of toxins within your cells. Strongly consider an appropriate detoxification protocol.

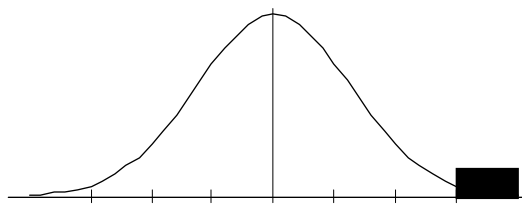


Water Sources

t,t-Muconic Acid, Mandelate[H], Phenylglyoxylate[H], M + P[H],
2-Methylhippurate[H], 3,4-Dimethylhippurate[H],
a-Hydroxyisobutyrate.

PSD: 126.94
PSS: 125.58

This panel ascertains the level of intracellular toxins sourced from water. Research shows most water supplies worldwide are tainted with a number of petrochemicals including: trimethylbenzene, toluene, styrene, and benzene. This profile likely shows a high level of intracellular toxins. Highly consider an appropriate detoxification protocol. Also consider testing your water supply - even if it is a well.



Clinical Correlation

Sample Report
Female / Age: 39

Environmental Pollutants Exposure Date: 5/23/2019

This report "MATCHES" clinical observations with the lab test. Elements shown, normal and abnormal, tend to characterize the observation. Highlighted elements are those reported to "MATCH" the characteristics of the clinical observation. Others are NOT matches but are elements in the observation.

No disease pattern matches > 66.0%