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*

# Basic Status High/Low

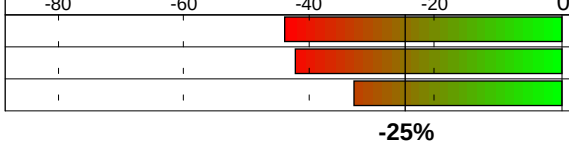
**Sample Report** **Environmental Pollutants Exposure Date: 5/23/2019**

Female / Age: 39

Client ID: (50651)

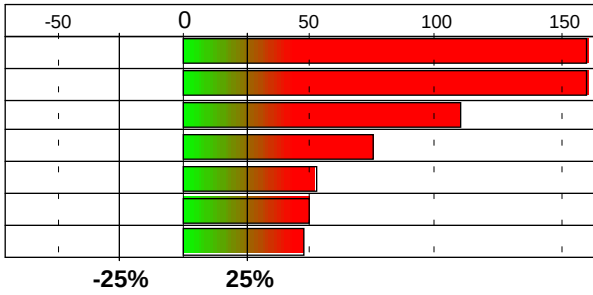
The % Status is the weighted deviation of the laboratory result.

## *Low Results*




| | % Status | | Result | *Low* | *High* |
|---|---|---|---|---|---|
| Hippurate | -43.87 | **L** | **41.20** | 0.00 | 672.00 |
| Monoethyl Phthalate | -42.31 | **L** | **0.01** | 0.00 | 0.13 |
| Benzoate | -32.71 | **L** | **1.21** | 0.00 | 7.00 |

## *High Results*



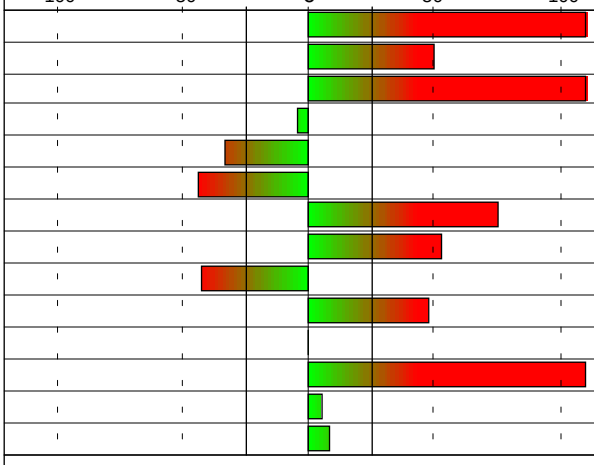

| | % Status | | Result | *Low* | *High* |
|---|---|---|---|---|---|
| 2-Methylhippurate | 650.00 | **H** | **0.28** | 0.00 | 0.04 |
| 3-Methylhippurate | 370.00 | **H** | **0.63** | 0.00 | 0.15 |
| p-Hydroxybenzoate | 110.00 | **H** | **2.24** | 0.00 | 1.40 |
| M + P | 75.00 | **H** | **0.80** | 0.00 | 0.64 |
| Mandelate | 52.50 | **H** | **0.41** | 0.00 | 0.40 |
| 3,4-Dimethylhippurate | 50.00 | **H** | **0.02** | 0.00 | 0.02 |
| Phenylglyoxylate | 47.50 | **H** | **0.39** | 0.00 | 0.40 |

# Basic Status Alphabetic

**Sample Report** **Environmental Pollutants Exposure Date: 5/23/2019**

Female / Age: 39

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




| | % 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 |
| Quinolinate | 5.56 | | 4.00 | 0.00 | 7.20 |
| t,t-Muconic Acid | 8.82 | | 0.10 | 0.00 | 0.17 |
| **Total Status Deviation** | **106.64** | | | | |
| **Total Status Skew** | **88.98** | | | | |

## 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**

## 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.

**Sample Report** **Environmental Pollutants Exposure Date: 5/23/2019**

Female / Age: 39

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

***Rationale***

| Decreased | Normal | Increased |
|---|---|---|
| | | p-Hydroxybenzoate |

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.

## 1-Styrene Detoxification Protocol See Nutrition Detail

| Decreased | Normal | Increased |
|---|---|---|
| | | M + P |
| | | Mandelate |
| | | Phenylglyoxylate |

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

## 1-Trimethylbenzene Detoxification See Nutrition Detail

| Decreased | Normal | Increased |
|---|---|---|
| | | 3,4-Dimethylhippurate |

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

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Female / Age: 39

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## 1-Xylene Detoxification Protocol See Nutrition Detail

***Rationale***

| Decreased | Normal | Increased |
|---|---|---|
| | | 3-Methylhippurate |
| | | 2-Methylhippurate |

Xylene, a ubiquitos petrochemical solvent, is first oxidized via p450 enzymes then conjugated with glycine to for 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

# Drug Interactions



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.

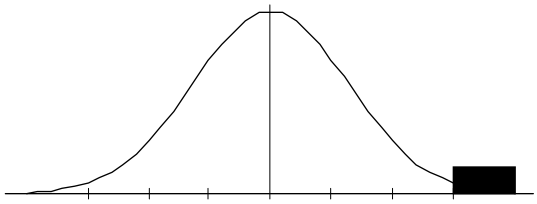
**Sample Report** **Environmental Pollutants Exposure Date: 5/23/2019**
Female / Age: 39

## 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.

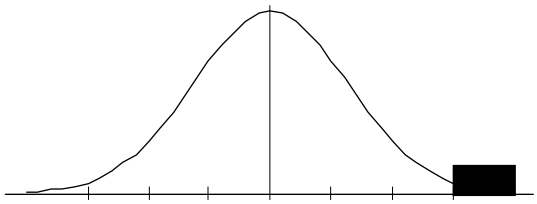


## Paint and Solvents

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.

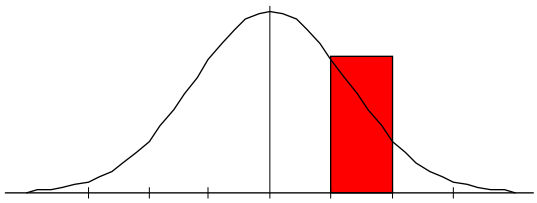


## Personal Care Products

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.

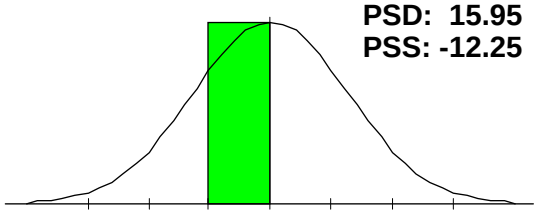


## Phthalates

Phthalate, Monoethyl Phthalate[L], Quinolinate.

**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.

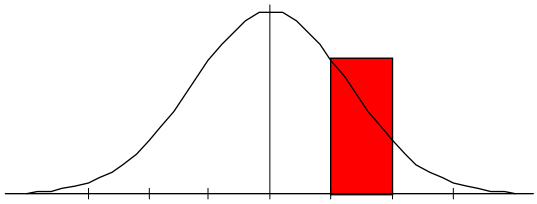


## Plastic Sources

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.

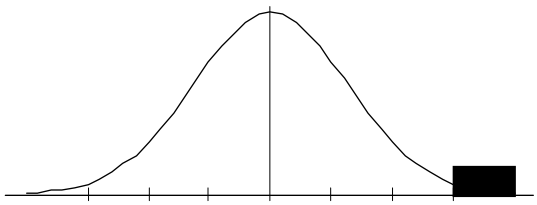


## Water Sources

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.



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%