

# 2310010002 - SELECTION DEMO

FINAL REPORT

Accession ID: 2310010002

Name: 2310010002 - SELECTION DEMO  
Date of Birth: 01-01-1111  
Gender: Male  
Age: 01  
Height:  
Weight:  
Fasting: UNKNOWN

Telephone: 000-000-0000  
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## Provider Information

Practice Name: DEMO CLIENT, MD  
Provider Name: DEMO CLIENT, MD  
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## Report Information












Current Result Previous Result In Control Moderate Risk

## Specimen Information

Sample Type	Collection Time	Received Time	Report	Final Report Date
Metal Free Urine	2023-10-13 00:00 (PDT)	2023-10-14 13:31 (PDT)	Total Toxins - P2	2023-10-27 17:10 (PDT)
			Mycotoxins - P3	2023-10-24 14:43 (PDT)
			Heavy Metals - P8	2023-10-25 21:51 (PDT)
			Environmental Toxins - P13	2023-10-24 00:43 (PDT)
			PFAS Chemicals - P23	2023-10-27 17:10 (PDT)

# Total Toxins - Summary

High						Heavy Metals	Environmental Toxins
Test Name	Current	Previous	Result		Reference		
			75th	95th			
 2-Hydroxyethyl Mercapturic Acid (HEMA)^ (ug/g)	18.29		1.7	4.75	≤4.75		
 Phenyl glyoxylic Acid (PGO)^ (ug/g)	1390.24		285	518	≤518		
 Barium^ (ug/g)	7.02		2.33	5.59	≤5.59		
 Uranium^ (ug/g)	0.06		0.02	0.04	≤0.04		

Suboptimal						Mycotoxins	Heavy Metals	Environmental Toxins	PFAS
Test Name	Current	Previous	Result		Reference				
			75th	95th					
 Ethylparaben ^ (ug/g)	12.65		5.41	99.3	≤99.3				
 Glyphosate (ug/g)	4.61		1.65	7.6	≤7.6				
 Perchlorate (PERC)^ (ug/g)	6.50		4.89	10.7	≤10.7				
 Tiglylglycine (TG) (ug/g)	0.15		0.09	3.24	≤3.24				
 Triclosan (TCS)^ (ug/g)	36.27		29.9	358	≤358				
 Arsenic^ (ug/g)	26.63		11.9	52	≤52				
 Gadolinium (ug/g)	0.24		0.17	0.45	≤0.45				
 Nickel (ug/g)	6.87		6.37	12.13	≤12.13				
 Ochratoxin A (OTA) (ng/g)	4.13		3.83	6.8	≤6.8				
 Perfluorobutanoic acid (PFBA) (ug/g)	0.077		0.066	0.113	≤0.113				
 Perfluorooctanoic acid (PFOA) (ug/g)	0.572		0.568	2.205	≤2.205				

Creatinine				
Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.94		0 0.24 2.16	0.25-2.16

## INTRODUCTION

is pleased to present to you, 'Mycotoxins panel', to help you make healthy lifestyle, dietary and treatment choices in consultation with your healthcare provider. It is intended to be used as a tool to encourage a general state of health and well-being. The Mycotoxins Panel is a test to identify and quantify the level of a large set of mycotoxins from both food and environmental molds. The panel is designed to give a complete picture of an individual's levels of these mycotoxins in urine. The results are provided in 3 tables subgrouping the mycotoxins into Aflatoxins, Trichothecenes and Other Mycotoxins. Reference ranges were determined using urine samples from 1000 apparently healthy individuals.

## Methodology:

The Mycotoxins panel uses tandem mass spectrometry methodology (LC-MS/MS) for quantitative detection of mycotoxins in urine samples. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. All mycotoxins are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

## Interpretation of Report:

The report begins with the summary page which lists only the mycotoxins whose levels are high or moderate based on the reference range. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. Following this section is the complete list of the mycotoxins results and their absolute levels are normalized with respect to Creatinine in a histogram format to enable a full overview along with the reference ranges. The level of the mycotoxin with reference range is shown with three shades of color – Green, Yellow and Red. The result in green corresponds to 0th to 75th percentile indicates mild (Low diet intake) exposure to the respective toxin. The result in yellow corresponds to 75th to 95th percentile indicates moderate exposure to the respective toxin whereas the result in red corresponding to greater than 95th percentile indicates high exposure to the respective toxin. All contents provided in the report are purely for informational purposes only and should not be considered medical advice. Any changes based on the information should be made in consultation with the clinical provider.

The Extend Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the Mycotoxins panel is performed by. provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at. By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to accept these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your healthcare provider for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

## Please note:

Pediatric ranges have not been established for this test. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes.

Aflatoxin

No markers are outside the normal reference range

Other Mycotoxins

Test Name	Current	Previous	75th	Result	95th	Reference
Ochratoxin A (OTA) (ng/g)	4.13		3.83		6.8	≤6.8

**BACKGROUND**

Ochratoxin is a mycotoxin produced by various fungal species such as *Aspergillus ochraceus*, *Aspergillus carbonarius*, *Aspergillus niger* and *Penicillium verrucosum*.

**ASSOCIATED RISK**

Ochratoxin A has been recognised as a renal toxin owing to its ability to induce nephrotoxicity and renal tumors. It displays a long elimination half-life and stimulates the major inflammatory cytokines released. Ochratoxin A is efficiently absorbed from the gastrointestinal tract into the small intestine where it seen to effectively interrupt the intestinal barrier functions.

**POSSIBLE SOURCES**

Contaminated Barley, oats, rye, wheat, coffee beans, pork.

**DETOX SUGGESTIONS**

Detoxification of ochratoxin involves the use of activated charcoal (AC) to bind and neutralize the toxin in the gastrointestinal tract. To minimize the risk of nutrient depletion, AC should be taken separately from essential nutrients. Concurrent use of an oral multimineral formula or IV nutrient therapy can help replenish any lost nutrients during detoxification.

Trichothecenes

No markers are outside the normal reference range

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.94			0.25-2.16

Aflatoxin

Test Name	Current	Previous	75th	Result	95th	Reference
Aflatoxin B1 (AFB1) (ng/g)	1.20		3.9		6.93	≤6.93
Aflatoxin B2 (AFB2) (ng/g)	0.95		4.58		8.13	≤8.13
Aflatoxin G1 (ng/g)	3.13		3.68		6.53	≤6.53
Aflatoxin G2 (ng/g)	5.84		6.08		10.8	≤10.8
Aflatoxin M1 (ng/g)	0.53		3.6		6.4	≤6.4

Other Mycotoxins

Test Name	Current	Previous	75th	Result	95th	Reference
Chaetoglobosin A (CHA) (ng/g)	3.51		17.93		31.87	≤31.87
Citrinin (CTN) (ng/g)	2.67		7.05		12.53	≤12.53
Dihydrocitrinone (ng/g)	5.46		9.3		16.53	≤16.53
Enniatin B1(ENN B1) (ng/g)	0.08		0.13		0.22	≤0.22
Fumonisin B1 (ng/g)	3.44		3.45		6.13	≤6.13
Fumonisin B2 (ng/g)	2.23		4.05		7.2	≤7.2
Fumonisin B3 (ng/g)	2.16		6.08		10.8	≤10.8
Gliotoxin (ng/g)	81.79		116.93		207.87	≤207.87
Mycophenolic Acid (ng/g)	1.31		3.6		6.4	≤6.4
Ochratoxin A (OTA) (ng/g)	4.13		3.83		6.8	≤6.8
Patulin (ng/g)	0.05		6.53		11.6	≤11.6
Sterigmatocystin (STC) (ng/g)	<0.05		0.3		0.53	≤0.53
Zearalenone (ZEN) (ng/g)	0.29		0.38		0.67	≤0.67

Trichothecenes

Test Name	Current	Previous	75th	Result	95th	Reference
Deoxynivalenol(DON) (ng/g)	14.44		37.95		67.47	≤67.47

Trichothecenes

Test Name	Current	Previous	75th	Result	95th	Reference
Diacetoxyscirpenol (DAS) (ng/g)	2.02		2.4		4.27	≤4.27
Nivalenol (NIV) (ng/g)	1.50		1.8		3.2	≤3.2
Roridin A (ng/g)	<0.05		4.28		7.6	≤7.6
Roridin E (ng/g)	<0.05		0.75		1.33	≤1.33
Roridin L2 (ng/g)	0.20		3.83		6.8	≤6.8
Satratoxin G (ng/g)	<0.05		0.1		0.18	≤0.18
Satratoxin H (ng/g)	<0.05		0.1		0.18	≤0.18
T-2 Toxin (ng/g)	0.05		0.1		0.18	≤0.18
Verrucarin A (ng/g)	0.11		0.75		1.33	≤1.33
Verrucarin J (ng/g)	2.39		5.18		9.2	≤9.2

## Risk and Limitations

This test has been developed and its performance characteristics determined by , a CLIA and CAP certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration.

Mycotoxins do not demonstrate absolute positive and negative predictive values for mold related illnesses. Clinical history must be incorporated into the diagnostic determination. Quantification of mycotoxins in urine is not FDA-recognized diagnostic indicator of mold exposure.

Mycotoxins testing is performed at, a CLIA certified laboratory and utilizes ISO-13485 developed technology. 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 mycotoxin due to circumstances beyond Vibrant's control. 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.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions.

makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of medication, supplementation or dietary changes.

SAMPLE

## INTRODUCTION

is pleased to present to you, 'Heavy Metals panel', to help you make healthy lifestyle, dietary and treatment choices in consultation with your healthcare provider. It is intended to be used as a tool to encourage a general state of health and well-being. The Heavy Metals is a test to measure levels of Heavy Metals that someone might be exposed to. The panel is designed to give a complete picture of an individual's levels of these metals in urine. Reference ranges were determined based on NHANES data ([cdc.gov/nhanes](https://cdc.gov/nhanes)) if available and other reference ranges are established based on urine samples from 1000 apparently healthy, unprovoked, unmedicated and unsupplemented individuals.

### Methodology:

The Heavy metals uses Inductively coupled plasma mass spectrometry (ICP-MS) for quantitative detection of heavy metals in urine. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. All heavy metals are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

### Interpretation of Report:

The report begins with the summary page which lists only the heavy metals whose levels are high or moderate based on the reference range. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. Following this section is the complete list of the heavy metals and their absolute levels are normalized with respect to Creatinine in a histogram format to enable a full overview along with the reference ranges. The level of the heavy metals with reference range is shown with three shades of color – Green, Yellow and Red. The result in green corresponds to 0th to 75th percentile indicates mild exposure to the respective heavy metal. The result in yellow corresponds to 75th to 95th percentile indicates moderate exposure to the respective heavy metal whereas the result in red corresponding to greater than 95th percentile indicates high exposure to the heavy metal. All contents provided in the report are purely for informational purposes only and should not be considered medical advice. Any changes based on the information should made in consultation with the clinical provider.

The platform provides tools for you to track and analyze your general wellness profile. Testing for the Heavy Metals panel is performed by . provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at . By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to accept these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your healthcare provider/dietitian for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

### Please note:

Pediatric ranges have not been established for this test. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes.



Heavy Metals

Test Name	Current	Previous	75th	Result	95th	Reference
Barium^ (ug/g)	7.02		2.33		5.59	≤5.59
<p><b>POSSIBLE SOURCES</b></p> <p>Drinking groundwater, contaminated food, injections, and waste sites.</p> <p><b>ASSOCIATED RISK</b></p> <p>Barium dissolves in the stomach and can result in symptoms like hypokalemia, diarrhea, nausea, vomiting, heart rhythm abnormalities, muscle cramps, and kidney disorders. Other symptoms include increased/decreased blood pressure and numbness around the face.</p> <p><b>DETOX SUGGESTIONS</b></p> <p>Barium is primarily eliminated from the body through conversion into the nontoxic barium sulfate in the gastrointestinal tract. This process can be facilitated by oral sulfate salts, such as sodium or magnesium sulfate, which decrease absorption. In severe cases, hemodialysis may be necessary to rapidly increase barium clearance, especially when supportive measures like intravenous potassium supplementation are ineffective.</p>						
Uranium^ (ug/g)	0.06		0.02		0.04	≤0.04
<p><b>POSSIBLE SOURCES</b></p> <p>Contaminated food and water, dermal exposures, and inhalation.</p> <p><b>ASSOCIATED RISK</b></p> <p>Ingestion of uranium may lead to kidney problems. As a result, the kidneys are the most impacted organ system by uranium exposure, both chronic and acute. Uranium may also impact DNA and cause chromosomal abnormalities. The main manifestation of uranium exposure is the cellular depletion of antioxidants which increases oxidative stress. Altered genomic stability and increased oxidative stress are hallmarks of aging. As a result, uranium intoxication may disrupt many biological processes which could lead to the risk of accelerated aging and developing age-associated conditions.</p> <p><b>DETOX SUGGESTIONS</b></p> <p>To detoxify uranium from the body, maintain adequate hydration to facilitate urinary excretion and avoid exposure to uranium sources. Chelation therapy is not typically recommended for uranium detoxification due to limited effectiveness and potential risks.</p>						
Arsenic^ (ug/g)	26.63		11.9		52	≤52
<p><b>POSSIBLE SOURCES</b></p> <p>Ingestion, inhalation, contaminated drinking water, dermal exposure, industrial manufacturing, food preservative, smoking, food grown in arsenic-contaminated soils, and cosmetics.</p> <p><b>ASSOCIATED RISK</b></p> <p>Acute arsenic poisoning includes diarrhea, vomiting, abdominal pain, muscle cramping, and numbness and tingling of extremities. Conversely, chronic exposure to arsenic is associated with severe health implications including skin, bladder, and lung cancer, heart attack, pulmonary disease, cardiovascular diseases, kidney failure, and diabetes.</p> <p><b>DETOX SUGGESTIONS</b></p> <p>Chelation therapy is commonly used for arsenic detoxification. Dimercaptosuccinic acid (DMSA) and dimercaptopropanesulfonic acid (DMPS) are chelating agents that bind to arsenic, facilitating its excretion through urine. These agents are administered orally and are effective in removing arsenic from the body. [18] Additionally, antioxidants such as selenium may help mitigate arsenic toxicity by reducing oxidative stress and promoting detoxification processes.</p>						

Heavy Metals

Test Name	Current	Previous	75th	Result	95th	Reference
Gadolinium (ug/g)	0.24		0.17		0.45	≤0.45

**POSSIBLE SOURCES**

Injecting gadolinium into the bloodstream for MRI is the main source of exposure.

**ASSOCIATED RISK**

Gadolinium's toxicity exerts a depressant effect on various bodily systems, manifesting in symptoms such as hypertension, tachycardia, abdominal pain, throat irritation, facial edema, and dry mouth.

**DETOX SUGGESTIONS**

Gadolinium is typically detoxified or removed from the body through chelation therapy. Chelating agents, such as diethylenetriamine pentaacetic acid (DTPA) or ethylenediaminetetraacetic acid (EDTA), are administered either orally or intravenously. These agents bind tightly to the gadolinium molecules, forming a complex that can be excreted through urine.

Nickel (ug/g)	6.87		6.37		12.13	≤12.13
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**POSSIBLE SOURCES**

Contaminated food, jewelry, cosmetics, keys, cell phones, paper clips, electrical equipment, alloy, orthodontic braces, eyeglass frames, and clothing fasteners.

**ASSOCIATED RISK**

Nickel toxicity poses a significant risk, leading to allergies, cardiovascular and kidney diseases, lung fibrosis, nasal and lung cancer, along with symptoms such as low blood pressure, muscle tremors, nausea, vomiting, haemorrhages, heart attacks, oral and/or intestinal cancer, and kidney dysfunction.

**DETOX SUGGESTIONS**

Chelation therapy utilizing agents such as EDTA (ethylenediaminetetraacetic acid) or DMSA (dimercaptosuccinic acid) facilitates the removal of nickel from the body by binding to the metal ions and aiding in their excretion via urine or feces. These chelating agents work by forming stable complexes with nickel, thereby reducing its toxicity. Additionally, antioxidants like vitamin C play a crucial role in mitigating oxidative stress induced by nickel exposure, supporting overall detoxification processes.

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.94			0.25-2.16

Heavy Metals					
Test Name	Current	Previous	Result		Reference
			75th	95th	
Aluminum (ug/g)	11.02		17.83	45.15	≤45.15
Antimony^ (ug/g)	0.03		0.07	0.16	≤0.16
Arsenic^ (ug/g)	26.63		11.9	52	≤52
Barium^ (ug/g)	7.02		2.33	5.59	≤5.59
Beryllium^ (ug/g)	<0.1		0.2	0.76	≤0.76
Bismuth (ug/g)	<0.1		0.58	2.53	≤2.53
Cadmium^ (ug/g)	<0.1		0.29	0.8	≤0.8
Cesium^ (ug/g)	2.30		6.37	10.3	≤10.3
Gadolinium (ug/g)	0.24		0.17	0.45	≤0.45
Lead^ (ug/g)	<0.1		0.52	1.16	≤1.16
Mercury^ (ug/g)	0.26		0.57	1.61	≤1.61
Nickel (ug/g)	6.87		6.37	12.13	≤12.13
Palladium (ug/g)	<0.1		0.15	0.2	≤0.2
Platinum^ (ug/g)	<0.05		0.1	0.9	≤0.9
Tellurium (ug/g)	0.20		0.42	0.89	≤0.89
Thallium^ (ug/g)	<0.1		0.24	0.43	≤0.43
Thorium (ug/g)	0.02		0.02	0.07	≤0.07
Tin^ (ug/g)	0.53		1	3.72	≤3.72
Tungsten^ (ug/g)	0.04		0.12	0.33	≤0.33
Uranium^ (ug/g)	0.06		0.02	0.04	≤0.04

## Risk and Limitations

This test has been developed and its performance characteristics determined and validated by , a CLIA and CAP certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration. provides additional contextual information on these tests and provides the report in more descriptive fashion.

Heavy Metals Toxins panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a healthcare provider's clinical assessment.

Heavy Metals Panel testing is performed at , a CLIA and CAP certified laboratory. 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 test due to circumstances beyond Vibrant's control. may re-test a sample 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.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions. Tested individuals may find their experience is not consistent with Vibrant's selected peer reviewed scientific research findings of relative improvement for study groups. The science in this area is still developing and many personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors. A limitation of this testing is that many of these scientific studies may have been performed in selected populations only. The interpretations and recommendations are done in the context of these studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities.

makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of medication, supplementation, or dietary changes.

SAMPLE

## INTRODUCTION

is pleased to present to you, 'Environmental Toxins Panel', to help you make healthy lifestyle, dietary and treatment choices in consultation with your healthcare provider. It is intended to be used as a tool to encourage a general state of health and well-being. The Toxins Panel is a test to measure levels of Environmental Toxins that someone might be exposed to. The panel is designed to give a complete picture of an individual's levels of these toxins in urine. The panel is sub-grouped into Pesticides, Phthalates, Parabens, Acrylic, Alkyl phenols and Volatile Organic Compounds. Reference ranges for tests flagged with ^ were determined based on NHANES data ([cdc.gov/nhanes](https://cdc.gov/nhanes)) if available and other reference ranges are established based on urine samples from 1000 apparently healthy individuals.

### Methodology:

The Environmental Toxins panel uses tandem mass spectrometry methodology (LC-MS/MS) for quantitative detection of toxins in urine samples. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. All environmental toxins are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

### Interpretation of Report:

The report begins with the summary page which lists only the environmental toxins whose levels are high or moderate in the reference range. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. Following this section is the complete list of the environmental toxins and their absolute levels are normalized with respect to Creatinine in a histogram format to enable a full overview along with the reference ranges. The level of the environmental toxins is shown with three shades of color – Green, Yellow and Red. The result in green corresponds to 0th to 75th percentile indicates mild exposure to the respective toxin. The result in yellow corresponds to 75th to 95th percentile indicates moderate exposure to the respective toxin whereas the result in red corresponding to greater than 95th percentile indicates high exposure to the respective toxin. All contents provided in the report are purely for informational purposes only and should not be considered medical advice. Any changes based on the information should be made in consultation with the clinical provider.

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### Please note:

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Environmental phenols

Test Name	Current	Previous	Result	Reference
			75th 95th	
Triclosan (TCS)^ (ug/g)	36.27		<div><div></div></div> 29.9 358	≤358

BACKGROUND

Triclosan (TCS) is an antibacterial and antifungal agent present in some consumer products, including toothpaste, soaps, detergents, toys, and surgical cleaning treatments.

ASSOCIATED RISK

TCS has been linked to an increased risk of food allergies, adding to concerns about its potential health effects. Furthermore, TCS has been identified as a weak endocrine disruptor, suggesting its ability to interfere with hormonal balance. Notably, prenatal exposure to triclosan has been associated with elevated cord testosterone levels in infants, highlighting its potential impact on early development and hormonal regulation. Exposure to this toxin has been linked to early kidney injury, an elevated risk of chronic kidney disease (CKD), and the potential for end-stage renal disease (ESRD). It is also responsible for inducing hepatic toxicity, renal toxicity, intestinal damage, and impairment of thyroid function.

POSSIBLE SOURCES

Exposure to triclosan occurs through skin absorption during activities like handwashing and showering, as well as through ingestion via tooth brushing, mouthwash, and swallowing, with additional potential sources including consuming plants grown in sewage sludge-treated soil and fish exposed to triclosan.

DETOX SUGGESTIONS

Incorporating binders like charcoal or clay-based products aids in reducing toxin levels by effectively binding and eliminating environmental toxins from the body. These substances encapsulate toxins, such as heavy metals and pollutants, facilitating their removal and potentially reducing zonulin levels, which contribute to a leaky gut (16). Supplementing with antioxidants like glutathione is essential for protecting cells from oxidative damage induced by environmental toxins. Glutathione, the body's primary antioxidant and detoxifier, plays a crucial role in combating harmful free radicals, supporting Phase II detoxification pathways, and preventing deficiency-related health issues.

Herbicides

Test Name	Current	Previous	75th	Result	95th	Reference
Glyphosate (ug/g)	4.61		1.65		7.6	≤7.6

**BACKGROUND**

Glyphosate is a broad-spectrum systemic herbicide and crop desiccant widely utilized to eliminate weeds, particularly annual broadleaf weeds and competing grasses in crop fields.

**ASSOCIATED RISK**

This exposure may have implications for liver health, metabolic disorders, and adverse effects on the nervous system. Glyphosate exposure during early life stages can disrupt normal cell development, impacting critical signalling pathways and causing issues like altered differentiation, neuronal growth, migration, and myelination (2,3).

**POSSIBLE SOURCES**

Glyphosate exposure can stem from various sources, including occupational use, residential proximity to farmland, living with occupational users, dietary consumption of food with residues, ingesting contaminated water, and secondary exposure through contact with treated areas.

**DETOX SUGGESTIONS**

Citrus pectin, alginates from kelp, and glycine act as powerful detoxifiers. Citrus pectin clears environmental toxins and cholesterol, alginates protect against herbicides and remove toxins, while glycine aids in glutathione production, preventing glyphosate storage. Ginkgo biloba serves as a potent protector against glyphosate toxicity (20-22).

Mitochondrial Marker

Test Name	Current	Previous	75th	Result	95th	Reference
Tiglylglycine (TG) (ug/g)	0.15		0.09		3.24	≤3.24

**BACKGROUND**

Tiglylglycine (TG) is associated with both mitochondrial and/or genetic disorders. It is a specific metabolite that plays a crucial role in the diagnosis of a rare genetic disorder known as '3-Hydroxyisobutyryl-CoA Hydrolase (HIBCH) Deficiency'. HIBCH deficiency is an inborn error in isoleucine metabolism, leading to the accumulation of isoleucine metabolites, including TG, in the urine of affected individuals

**ASSOCIATED RISK**

Mutations of mitochondrial DNA can be triggered by toxins, infections, inflammation, and nutritional deficiencies. Mitochondrial dysfunction has been linked with aging, diabetes, autism, chronic fatigue syndrome, PD and Alzheimer's syndromes. The presence of elevated levels of TG in the urine serves as a biomarker for HIBCH deficiency. This disorder is associated with various clinical manifestations, including microcephaly, epilepsy, choreoathetoid movements, ophthalmologic disorders, progressive neurodegeneration, psychomotor retardation or regression, hearing impairment, and even cardiomyopathy. Unfortunately, the disease can lead to a significantly shortened lifespan for some individuals

**POSSIBLE SOURCES**

β-ketothiolase deficiency is a rare genetic disorder characterized by the inability to properly metabolize certain compounds, including isoleucine and its derivatives. Therefore, individuals with β -ketothiolase deficiency usually excrete TG in excess amounts.

**DETOX SUGGESTIONS**

Tiglylglycine (TG) can be detoxified from the body through enzymatic breakdown pathways in the liver, where it is metabolized into smaller molecules that can be excreted through urine. Adequate hydration and a balanced diet rich in nutrients that support liver function can aid in the efficient removal of TG from the body.

Other Markers

Test Name	Current	Previous	75th	Result	95th	Reference
Perchlorate (PERC)^ (ug/g)	6.50		4.89		10.7	≤10.7

**BACKGROUND**

Perchlorate is a highly stable anion often found in salts such as ammonium, sodium, or potassium perchlorate. Its presence in drinking water and the environment, primarily from its use in flares, explosives, and rocket propellants, has raised public concern due to its toxicological effects.

**ASSOCIATED RISK**

Exposure to perchlorate poses significant health risks, particularly due to its disruption of iodide uptake in the thyroid gland, which can lead to thyroid dysfunction. Its widespread presence in drinking water aquifers and toxicological properties make it an emerging chemical of concern.

**POSSIBLE SOURCES**

Sources of perchlorate exposure include drinking water contaminated by industrial activities. It is also found in soil, vegetation, groundwater, and surface water.

**DETOX SUGGESTIONS**

Detoxification of perchlorate (PERC) involves increasing water intake to promote urinary excretion, consuming iodine-rich foods to compete with perchlorate uptake, and incorporating chlorophyll-rich foods and dietary fiber to aid in toxin elimination through fecal excretion.

Parabens

Test Name	Current	Previous	75th	Result	95th	Reference
Ethylparaben ^ (ug/g)	12.65		5.41		99.3	≤99.3

**BACKGROUND**

Ethylparaben is produced naturally and found in several fruits and insects, where it acts as an antimicrobial agent. It is also can be used as feed preservatives and antiseptic for bacteria. Ethylparaben is mainly used as antiseptics in cosmetics, food, and medicine. Although parabens are generally considered safe when used in low percentages, a study claimed to have found a link between parabens and breast cancer. Ethylparaben is readily absorbed from the gastrointestinal tract or through the skin. It is hydrolysed to p-hydroxybenzoic acid and rapidly excreted in urine without accumulating in the body.

**ASSOCIATED RISK**

Populations exposed to large amounts of ethylparaben may have a high burden of estrogenicity-related disease and endocrine disruption. Environmental exposure to ethylparaben might elevate blood pressure levels and increase the risk of high blood pressure.

**POSSIBLE SOURCES**

Exposure typically occurs through ingestion of foods and medications and dermal application of personal care products.

**DETOX SUGGESTIONS**

Hydration, exercise, and a diet abundant in whole foods are pivotal in supporting the body's innate detoxification mechanisms, potentially aiding in the reduction of paraben exposure. However, it is important to note that while these strategies are beneficial for overall health, there's limited scientific evidence directly addressing the elimination of parabens from the body.



Pesticides

No markers are outside the normal reference range


Phthalates

No markers are outside the normal reference range

Volatile organic compounds

Test Name	Current	Previous	75th	Result	95th	Reference
2-Hydroxyethyl Mercapturic Acid (HEMA)^ (ug/g)	18.29		1.7		4.75	≤4.75
<p><b>BACKGROUND</b></p> <p>2-Hydroxyethyl Mercapturic Acid (HEMA) is a urinary metabolite associated with exposure to various chemicals, including acrylonitrile, ethylene oxide, and vinyl chloride. It is detected in urine after ingestion, inhalation, or absorption of these chemicals, and is included in health assessments such as the National Health and Nutrition Examination Survey (NHANES).</p> <p><b>ASSOCIATED RISK</b></p> <p>Exposure to chemicals metabolized into HEMA poses potential health risks, particularly for individuals exposed to tobacco smoke, ethylene oxide, ethylene dibromide, or acrylonitrile. These chemicals are associated with various adverse health effects, and HEMA serves as a biomarker for their exposure.</p> <p><b>POSSIBLE SOURCES</b></p> <p>Sources of HEMA exposure includes tobacco smoke, ethylene oxide from sterilization processes, ethylene dibromide historically used as a fumigant and pesticide, and acrylonitrile from occupational sources. Other potential sources include certain foods, indoor smoke, home and cleaning products, and industrial emissions.</p> <p><b>DETOX SUGGESTIONS</b></p> <p>Detoxification of HEMA can be supported by increasing water intake to promote urinary excretion and consuming sulfur-rich foods like garlic and onions, which aid liver detoxification pathways. Regular exercise can also facilitate toxin elimination through sweating and improved circulation.</p>						
Phenyl glyoxylic Acid (PGO)^ (ug/g)	1390.24		285		518	≤518
<p><b>BACKGROUND</b></p> <p>Phenyl glyoxylic Acid (PGO) is a metabolite of styrene. Styrene is used in the manufacturing of plastics, in building materials, and is found in car exhaust fumes. Polystyrene and its copolymers are widely used as food-packaging materials.</p> <p><b>ASSOCIATED RISK</b></p> <p>Styrene is a known carcinogen, especially in the case of eye contact. Long-term exposure to styrene may cause central nervous system and kidney effects, headaches, depression, fatigue, hearing loss, balance, and concentration problems, and even cancer.</p> <p><b>POSSIBLE SOURCES</b></p> <p>Exposure to PGO can occur through occupational contact in chemical industries and potentially through environmental contamination, affecting individuals living near industrial sources or using products containing PGO.</p> <p><b>DETOX SUGGESTIONS</b></p> <p>To detoxify Phenyl glyoxylic Acid (PGO) from the body, focus on increasing water intake to promote urinary excretion and consider consuming foods rich in sulfur-containing compounds, such as garlic and onions, which support liver detoxification pathways. Additionally, regular exercise can aid in the elimination of toxins through sweating and improved circulation.</p>						

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.94			0.25-2.16

SAMPLE

# Environmental Toxins

Environmental phenols					
Test Name	Current	Previous	Result		Reference
			75th	95th	
4-Nonylphenol (ug/g)	0.35		0.42	2.06	≤2.06
Bisphenol A (BPA)^ (ug/g)	1.77		2.12	5.09	≤5.09
Triclosan (TCS)^ (ug/g)	36.27		29.9	358	≤358
Herbicides					
Test Name	Current	Previous	Result		Reference
			75th	95th	
2,4-Dichlorophenoxyacetic Acid (2,4-D)^ (ug/g)	0.29		0.5	1.55	≤1.55
Atrazine ^ (ug/g)	<0.01		0.02	0.05	≤0.05
Atrazine mercapturate^ (ug/g)	0.02		0.02	0.05	≤0.05
Glyphosate (ug/g)	4.61		1.65	7.6	≤7.6
Mitochondrial Marker					
Test Name	Current	Previous	Result		Reference
			75th	95th	
Tiglylglycine (TG) (ug/g)	0.15		0.09	3.24	≤3.24
Other Markers					
Test Name	Current	Previous	Result		Reference
			75th	95th	
Diphenyl Phosphate (DPP) (ug/g)	0.94		1.1	3.7	≤3.7
N-acetyl-S-(2-carbamoyl-ethyl)-cysteine^ (ug/g)	5.41		82	199	≤199
Perchlorate (PERC)^ (ug/g)	6.50		4.89	10.7	≤10.7
Parabens					
Test Name	Current	Previous	Result		Reference
			75th	95th	
Butylparaben^ (ug/g)	0.09		0.25	4.39	≤4.39
Ethylparaben ^ (ug/g)	12.65		5.41	99.3	≤99.3
Methylparaben^ (ug/g)	54.52		180	653	≤653
Propylparaben^ (ug/g)	14.10		36.7	222	≤222

# Environmental Toxins

## Pesticides

Test Name	Current	Previous	75th	Result	95th	Reference
2,2-bis(4-Chlorophenyl) acetic acid (DDA) (ug/g)	5.65		7.9		19	≤19
3-Phenoxybenzoic Acid (3PBA)^ (ug/g)	0.14		1.01		5.44	≤5.44
Diethyl phosphate (DEP)^ (ug/g)	2.15		3.2		15.7	≤15.7
Diethyldithiophosphate (DEDTP)^ (ug/g)	0.13		0.17		0.3	≤0.3
Diethylthiophosphate (DETP)^ (ug/g)	0.47		1.24		3.92	≤3.92
Dimethyl phosphate (DMP)^ (ug/g)	0.03		9.1		33.6	≤33.6
Dimethyldithiophosphate (DMDTP)^ (ug/g)	0.66		0.67		6.12	≤6.12
Dimethylthiophosphate (DMTP)^ (ug/g)	5.60		5.91		33.7	≤33.7

## Phthalates

Test Name	Current	Previous	75th	Result	95th	Reference
Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)^ (ug/g)	0.05		14.1		37.7	≤37.7
Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)^ (ug/g)	6.44		8.99		23.4	≤23.4
Mono-2-ethylhexyl phthalate (MEHP)^ (ug/g)	0.02		2.73		8.47	≤8.47
Mono-ethyl phthalate (MEtP)^ (ug/g)	24.28		94.2		541	≤541

## Volatile organic compounds

Test Name	Current	Previous	75th	Result	95th	Reference
2-Hydroxyethyl Mercapturic Acid (HEMA)^ (ug/g)	18.29		1.7		4.75	≤4.75
2-Hydroxyisobutyric Acid (2HIB) (ug/g)	499.49		795.93		1215.72	≤1215.72
2-Methylhippuric Acid (2MHA)^ (ug/g)	10.40		77.9		248	≤248
3-Methylhippuric Acid (3MHA) (ug/g)	17.83		64.8		612.83	≤612.83
4-Methylhippuric Acid (4MHA) (ug/g)	21.77		65.51		752.72	≤752.72
N-Acetyl (2-Cyanoethyl) Cysteine (NACE)^ (ug/g)	0.03		5.28		256	≤256
N-Acetyl (2-Hydroxypropyl) Cysteine (NAHP)^ (ug/g)	11.86		101		403	≤403

# Environmental Toxins

Volatile organic compounds					
Test Name	Current	Previous	Result		Reference
			75th	95th	
N-Acetyl (3,4-Dihydroxybutyl) Cysteine^ (ug/g)	2.72		374	583	≤583
N-Acetyl (Propyl) Cysteine (NAPR)^ (ug/g)	1.38		11.3	46.1	≤46.1
N-acetyl phenyl cysteine (NAP)^ (ug/g)	0.01		1.29	3.03	≤3.03
Phenyl glyoxylic Acid (PGO)^ (ug/g)	1390.24		285	518	≤518

SAMPLE

## Risk and Limitations

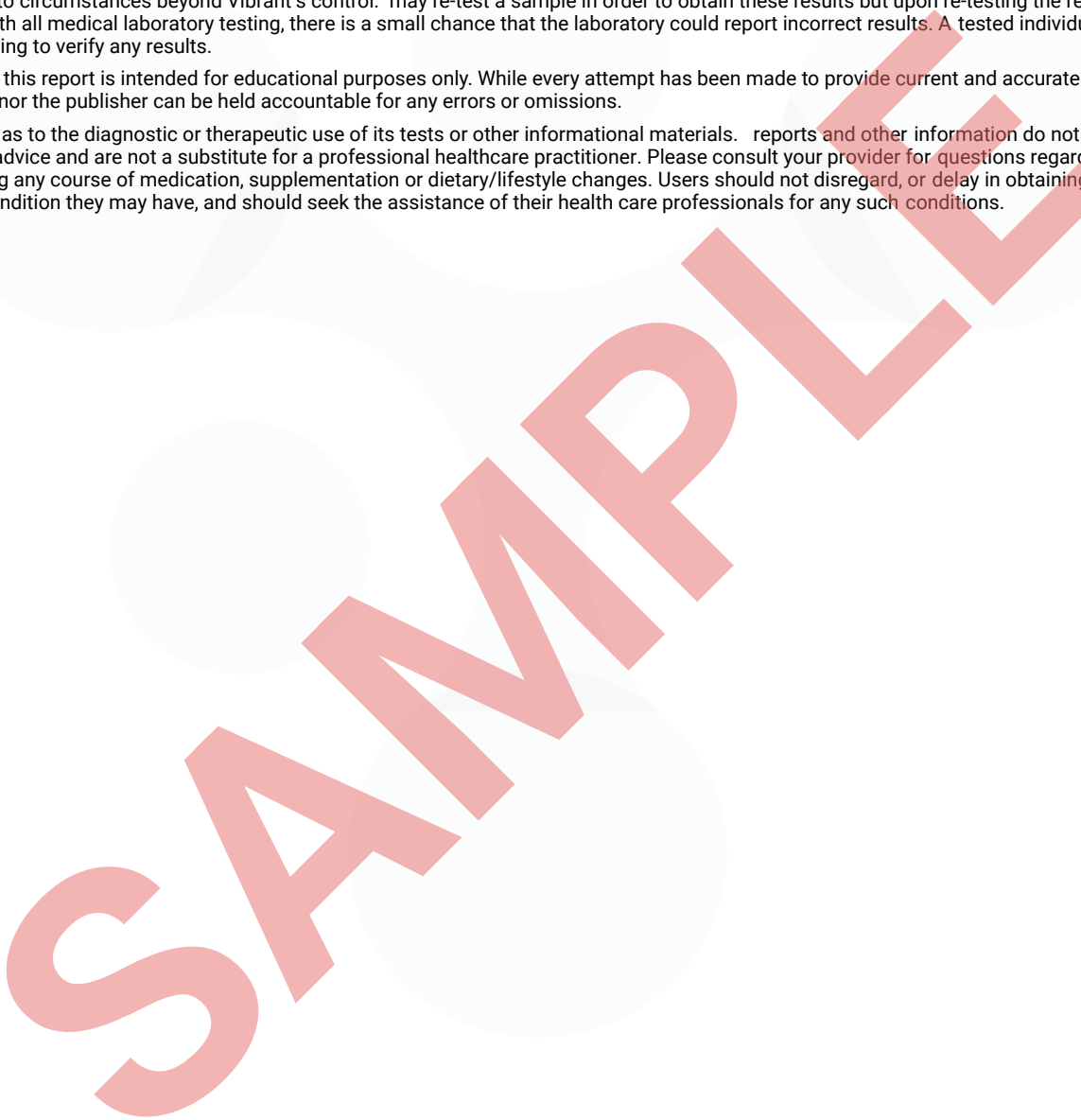
This test has been developed and its performance characteristics determined by LLC., a CLIA certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration.

Environmental Toxins panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a physician's clinical assessment.

Environmental Toxins Panel testing is performed at , a CLIA certified laboratory and utilizes ISO-13485 developed technology. 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 toxin due to circumstances beyond Vibrant's control. 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.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions.

makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. reports and other information do not constitute the giving of medical advice and are not a substitute for a professional healthcare practitioner. Please consult your provider for questions regarding test results, or before beginning any course of medication, supplementation or dietary/lifestyle changes. Users should not disregard, or delay in obtaining, medical advice for any medical condition they may have, and should seek the assistance of their health care professionals for any such conditions.



## INTRODUCTION

is pleased to present to you, 'PFAS chemicals panel', to help you make healthy lifestyle, dietary and treatment choices in consultation with your healthcare provider. It is intended to be used as a tool to encourage a general state of health and well-being. The PFAS chemicals Panel is a test to measure the levels of PFAS chemicals present in your urine. The panel is sub-grouped into Pesticides, Phthalates, Parabens, Acrylic, Alkyl phenols and Volatile Organic Compounds. Reference ranges for tests flagged with ^ were determined based on NHANES data ([cdc.gov/nhanes](https://www.cdc.gov/nhanes)) if available and other reference ranges are established based on urine samples from 1000 apparently healthy individuals.

### Methodology:

The PFAS Chemicals panel uses tandem mass spectrometry methodology (LC-MS/MS) for quantitative detection of PFAS in urine samples. Urine creatinine is measured using a kinetic colorimetric assay based on the Jaffé method. All PFAS chemicals are reported as the quantitative result normalized to urine creatinine to account for urine dilution variations.

### Interpretation of Report:

The report begins with the summary page which lists only the PFAS chemicals whose levels are >95th percentile (Red) and 75th-95th percentile (Yellow) of reference range, normalized to Urine creatinine levels. Additionally, the previous value is also indicated for your referral (if available). Following this section is the complete list of the PFAS chemicals and their absolute levels normalized to Creatinine in a quartile format along with the reference ranges. These levels are shown with three shades of color – Green, Yellow and Red. The result in green corresponds to 0 to 75th percentile, the result in yellow corresponds to 75th to 95th percentile and the result in red corresponds to greater than 95th percentile of reference range. All content provided in the report is purely for informational purposes only and should not be considered medical advice. Any changes based on the information should be made in consultation with your healthcare provider.

The platform provides tools for you to track and analyze your general wellness profile. Testing for the PFAS chemicals panel is performed by , a CLIA certified lab CLIA#: . provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at . By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your healthcare provider for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

### Please note:

Pediatric ranges have not been established for this test. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes.

PFAS

Test Name	Current	Previous	75th	Result	95th	Reference
Perfluorobutanoic acid (PFBA) (ug/g)	0.077		0.066		0.113	≤0.113

**POSSIBLE SOURCES**

Working in chemicals manufacturing and processing, Contaminated soil, Contaminated water, Personal care products, Cosmetics, Grease-resistant paper, Fast food containers or wrappers, Microwave popcorn bags.

**ASSOCIATED RISK**

Exposure to PFBA can cause peroxisome proliferation, peroxisomal fatty acid oxidation induction, and hepatomegaly. PFBA has the potential to generate oxidative stress and thereby induce DNA damage causing genomic instability. As genomic stability is the hallmark of ageing PFBA can cause age associated conditions.

**DETOX SUGGESTIONS**

To detoxify PFBA, individuals should prioritize reducing exposure by avoiding contaminated water, food, and products containing perfluorinated compounds. Implementing air filtration systems can help minimize inhalation exposure. Supporting the body's natural detoxification mechanisms through adequate hydration, a balanced diet, and regular exercise may assist in eliminating PFBA.

Perfluorooctanoic acid (PFOA) (ug/g)	0.572		0.568		2.205	≤2.205
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**POSSIBLE SOURCES**

Sources of exposure to perfluorooctanoic acid (PFOA) include contaminated drinking water, non-stick cookware, kitchen utensils, sealants, tapes, waterproof textiles, dental floss, leather goods, upholstered furniture, carpets, and rugs. Groundwater contamination can occur near sewage treatment plants, industrial sites, landfills, and locations where PFOA is used in firefighting foam. Additionally, fish and shellfish can accumulate PFOA from contaminated water, potentially impacting the food chain.

**ASSOCIATED RISK**

PFOA is a suspected endocrine disruptor and a common environmental pollutant. PFOA exposure may lead to a variety of adverse effects, including hepatotoxicity, immunotoxicity, and developmental toxicity. PFOA can stimulate cell migration and invasion, showing its potential to induce neoplastic transformation of human breast epithelial cells. Symptoms of PFOA are likely to be conditions like thyroid disease, high cholesterol, ulcerative colitis, pregnancy-induced hypertension, changes in liver function and reduced immune response. Severity of PFOA exposure can lead to cancers especially kidney, testicular, and thyroid cancer .

**DETOX SUGGESTIONS**

Regular administration of cholestyramine (CSM) resulted in the gastrointestinal elimination of different PFAS, including PFOA leading to a subsequent decrease in serum levels of all PFAS. However, additional investigation is necessary to grasp thoroughly the efficacy and safety of utilizing CSM therapy for detoxifying PFAS.

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.94			0.25-2.16



PFAS					
Test Name	Current	Previous	Result		Reference
			75th	95th	
GenX/HPFO-DA (ug/g)	<0.005		1.045	6.689	≤6.689
9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (ug/g)	<0.005		0.472	2.75	≤2.75
Dodecafluoro-3H-4,8-dioxanoate (NaDONA) (ug/g)	0.008		0.372	1.916	≤1.916
Perfluoro-[1,2-13C2] octanoic acid (M2PFOA) (ug/g)	<0.005		0.45	2.054	≤2.054
Perfluoro-1-[1,2,3,4-13C4] octanesulfonic acid (ug/g)	<0.005		0.645	2.68	≤2.68
Perfluoro-1-heptane sulfonic acid (PFHpS) (ug/g)	<0.005		0.628	3.783	≤3.783
Perfluoro-n-[1,2-13C2] decanoic acid (MPFDA) (ug/g)	<0.005		0.94	2.907	≤2.907
Perfluoro-n-[1,2-13C2] hexanoic acid (ug/g)	<0.005		0.091	0.325	≤0.325
Perfluorobutanoic acid (PFBA) (ug/g)	0.077		0.066	0.113	≤0.113
Perfluorodecanoic acid (PFDeA) (ug/g)	<0.005		0.696	2.399	≤2.399
Perfluorododecanoic acid (PFDoA) (ug/g)	<0.005		0.54	1.769	≤1.769
Perfluoroheptanoic acid (PFHpA) (ug/g)	<0.005		0.106	0.142	≤0.142
Perfluorohexane Sulfonic Acid (PFHxS) (ug/g)	0.034		0.113	1.681	≤1.681
Perfluorohexanoic acid (PFHxA) (ug/g)	<0.005		0.01	0.156	≤0.156
Perfluorononanoic acid (PFNA) (ug/g)	<0.005		0.652	1.31	≤1.31
Perfluorooctane sulfonic acid (PFOS) (ug/g)	<0.005		0.658	3.215	≤3.215
Perfluorooctanoic acid (PFOA) (ug/g)	0.572		0.568	2.205	≤2.205
Perfluoropentanoic acid (PFPeA) (ug/g)	0.040		0.193	0.731	≤0.731
Perfluorotetradecanoic acid (PFTeDA) (ug/g)	<0.005		1.478	4.912	≤4.912
Perfluorotridecanoic acid (PFTrDA) (ug/g)	<0.005		1.263	3.96	≤3.96
Perfluoroundecanoic acid (PFUnA) (ug/g)	<0.005		0.695	1.267	≤1.267

## Risk and Limitations

This test has been developed and its performance characteristics determined and validated by LLC., a CLIA certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration. provides additional contextual information on these tests and provides the report in more descriptive fashion.

PFAS chemicals panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a healthcare provider's clinical assessment.

PFAS chemicals panel testing is performed at , a CLIA certified laboratory. 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 test due to circumstances beyond Vibrant's control. may re-test a sample 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.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions. Tested individuals may find their experience is not consistent with Vibrant's selected peer reviewed scientific research findings of relative improvement for study groups. The science in this area is still developing and many personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors. A limitation of this testing is that many of these scientific studies may have been performed in selected populations only. The interpretations and recommendations are done in the context of these studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities.

makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of medication, supplementation, or dietary changes.

SAMPLE