ENVIRONMENTAL TOXINS DEMO

FINAL REPORT

Accession ID: 2308190002

Name: ENVIRONMENTAL TOXINS DEMO
Date of Birth: 01-01-1111
Gender: Male
Age: 01
Height:
Weight:
Fasting: FASTING

Telephone: 000-000-0000
Street Address:
Email:

Provider Information

Practice Name: DEMO CLIENT, MD
Provider Name: DEMO CLIENT, MD
Phlebotomist: 0

Telephone: 000-000-0000
Address: 3521 Leonard Ct, Santa Clara, CA 95054

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	2023-08-31 06:30 (PDT)	2023-09-01 15:45 (PDT)	Environmental Toxins - P2	2023-09-13 11:56 (PDT)

VibrantWellness
3521 Leonard Ct, Santa Clara, CA 95054
1-866-364-0963 | support@vibrant-america.com | www.vibrant-america.com

TNP Test not performed | R&L Refer to risks and limitations at the end of report | Notes Refer to Lab notes at the end of the table

Environmental Toxins

INTRODUCTION

Vibrant Wellness 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 Vibrant Environmental 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) if available and other reference ranges are established based on urine samples from 1000 apparently healthy individuals.

Methodology:

The Vibrant 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.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the Environmental Toxins panel is performed by Vibrant America, a CLIA certified lab CLIA#:05D2078809. Vibrant Wellness provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at www.vibrant-wellness.com. 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 physician/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 physician before making any changes. To schedule an appointment with Vibrant Clinical Dietitians please call: Toll-Free 866-364-0963.

Environmental Toxins - Summary

Environmental phenols

Test Name	Current	Previous	Result (75th / 95th)	Reference
Bisphenol A (BPA)^ (ug/g)	7.14	18.19 (02-01-2023)	2.12 / 5.09	≤5.09

BACKGROUND

BPA is one of the highest volume of chemicals produced worldwide. It is a starting material for the synthesis of plastics. BPA-based plastic is clear and tough, and is made into plastic bottles including water bottles, sports equipment, CDs, and DVDs. Epoxy resins containing BPA are used to line water pipes, as coatings on the inside of many food and beverage cans and in making thermal paper such as that used in sales receipts.

ASSOCIATED RISK

Exposure to Bisphenol A cause fertility problems, male impotence, heart disease and other conditions. BPA is a xenoestrogen, exhibiting estrogen-mimicking, hormone-like properties that raise concern about its suitability in some consumer products and food containers.

POSSIBLE SOURCES

The main source of BPA contamination in humans is through food, primarily driven by the exposure of animals and raw materials to BPA, the accumulation of BPA in the environment, and the contact of food with polymers containing this substance. Inhalation is the second main source of exposure. BPA can accumulate in household dust and be inhaled.

DETOX SUGGESTIONS

The detoxification mechanism for BPA involves sweating, as facilitated by infrared and steam sauna sessions. Sweating allows BPA to be released from the body through the skin.

Herbicides

Test Name	Current	Previous	Result (75th / 95th)	Reference
Atrazine ^ (ug/g)	0.04	0.04 (02-01-2023)	0.02 / 0.05	≤0.05

BACKGROUND

Atrazine is a widely used herbicide that prevents pre- and post-emergence broadleaf weeds in crops like maize (corn) and sugarcane, as well as on turf like golf courses and residential lawns.

ASSOCIATED RISK

Studies suggest it is an endocrine disruptor, an agent that can alter the natural hormonal system. The implications for children's health are related to effects during pregnancy and during sexual development.

POSSIBLE SOURCES

It used to be the most detected pesticide contaminating drinking water.

DETOX SUGGESTIONS

To detoxify Atrazine from the body, focus on hydration to support kidney function and increase urine output. Consuming foods rich in antioxidants, such as fruits and vegetables, may also aid in neutralizing Atrazine's effects and promoting its elimination through the liver.

Environmental Toxins - Summary

Herbicides

Test Name	Current	Previous	Result (75th: 1.65, 95th: 7.6)	Reference
Glyphosate (ug/g)	3.37	3.65 (02-01-2023)		≤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. Gingko biloba serves as a potent protector against glyphosate toxicity (20-22).

Mitochondrial Marker

No markers are outside the normal reference range

Other Markers

No markers are outside the normal reference range

Parabens

No markers are outside the normal reference range

Pesticides

No markers are outside the normal reference range

Phthalates

No markers are outside the normal reference range

Environmental Toxins - Summary

Volatile organic compounds

Test Name	Current	Previous	Result (75th / 95th)	Reference
2-Hydroxyethyl Mercapturic Acid (HEMA)^ (ug/g)	7.73	12.44 (02-01-2023)	1.7 / 4.75	≤4.75

BACKGROUND

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).

ASSOCIATED RISK

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.

POSSIBLE SOURCES

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.

DETOX SUGGESTIONS

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.

Test Name	Current	Previous	Result (65.51 / 752.72)	Reference
4-Methylhippuric Acid (4MHA) (ug/g)	440.84	733.89 (02-01-2023)	65.51 / 752.72	≤752.72

BACKGROUND

4-Methylhippuric acid (4MHA) is a metabolite of the isomers of xylene. In addition to being a solvent, xylenes are also used in perfumes, detergents, pesticides, and fuel.

ASSOCIATED RISK

The main effect of inhaling xylene vapour is depression of the central nervous system (CNS), with symptoms such as headache, dizziness, nausea, and vomiting. Long-term exposure may lead to irritability, depression, insomnia, agitation, extreme tiredness, tremors, hearing loss, impaired concentration, and short-term memory loss. A condition called chronic solvent-induced encephalopathy, commonly known as "organic solvent syndrome," has been associated with xylene exposure. Exposure to xylene is known to result in immunologic, respiratory, carcinogenic, reproductive, neurologic, and cardiovascular effects.

POSSIBLE SOURCES

Exposure to xylene occurs primarily through dermal, oral, and respiratory pathways. Dermal exposure is likely to occur among those who work with xylene directly in occupational settings, such as painters, pesticide-manufacturing workers, medical-histology laboratory workers, polymer workers, and steelworkers. Xylene ingestion may occur through consumption of xylene-contaminated foods. Tobacco smoke is a common source of xylene, and among smokers it is the principal exposure source of xylene.

DETOX SUGGESTIONS

To detoxify 4-Methylhippuric acid (4MHA) from the body, focus on increasing water intake to facilitate urinary excretion and consume foods rich in sulfur-containing compounds like garlic and onions, which support liver detoxification pathways. Additionally, regular exercise can aid in the elimination of toxins through sweat and improved circulation.

Environmental Toxins - Summary

Creatinine

Test Name	Current	Previous	Result	Reference
Urine Creatinine (mg/mL)	0.74	1.09 (01-18-2023)	0 0.24 2.16	0.25-2.16

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Environmental Toxins

Environmental phenols

Test Name	Current	Previous	Result (75th / 95th)	Reference
4-Nonylphenol (ug/g)	0.09	0.17 (02-01-2023)	0.42 / 2.06	≤2.06
Bisphenol A (BPA)^ (ug/g)	7.14	18.19 (02-01-2023)	2.12 / 5.09	≤5.09
Triclosan (TCS)^ (ug/g)	0.27	22.69 (02-01-2023)	29.9 / 358	≤358

Herbicides

Test Name	Current	Previous	Result (75th / 95th)	Reference
2,4-Dichlorophenoxyacetic Acid (2,4-D)^ (ug/g)	0.38	0.02 (02-01-2023)	0.5 / 1.55	≤1.55
Atrazine ^ (ug/g)	0.04	0.04 (02-01-2023)	0.02 / 0.05	≤0.05
Atrazine mercapturate^ (ug/g)	0.02	0.01 (02-01-2023)	0.02 / 0.05	≤0.05
Glyphosate (ug/g)	3.37	3.65 (02-01-2023)	1.65 / 7.6	≤7.6

Mitochondrial Marker

Test Name	Current	Previous	Result (75th / 95th)	Reference
Tiglylglycine (TG) (ug/g)	0.03	0.02 (02-01-2023)	0.09 / 3.24	≤3.24

Other Markers

Test Name	Current	Previous	Result (75th / 95th)	Reference
Diphenyl Phosphate (DPP) (ug/g)	0.38	0.48 (02-01-2023)	1.1 / 3.7	≤3.7
N-acetyl-S-(2-carbamoylethyl)-cysteine^ (ug/g)	3.41	8.15 (02-01-2023)	82 / 199	≤199
Perchlorate (PERC)^ (ug/g)	2.48	2.03 (02-01-2023)	4.89 / 10.7	≤10.7

Parabens

Test Name	Current	Previous	Result (75th / 95th)	Reference
Butylparaben^ (ug/g)	0.18	0.03 (02-01-2023)	0.25 / 4.39	≤4.39
Ethylparaben ^ (ug/g)	2.32	4.51 (02-01-2023)	5.41 / 99.3	≤99.3
Methylparaben^ (ug/g)	94.25	14.22 (02-01-2023)	180 / 653	≤653
Propylparaben^ (ug/g)	27.34	36.56 (02-01-2023)	36.7 / 222	≤222

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Pesticides

Test Name	Current	Previous	Result (75th / 95th)	Reference
2,2-bis(4-Chlorophenyl) acetic acid (DDA) (ug/g)	0.11	4.60 (02-01-2023)	7.9 / 19	≤19
3-Phenoxybenzoic Acid (3PBA)^ (ug/g)	0.94	0.32 (02-01-2023)	1.01 / 5.44	≤5.44
Diethyl phosphate (DEP)^ (ug/g)	2.11	0.49 (02-01-2023)	3.2 / 15.7	≤15.7
Diethyldithiophosphate (DEDTP)^ (ug/g)	0.08	0.01 (02-01-2023)	0.17 / 0.3	≤0.3
Diethylthiophosphate (DETP)^ (ug/g)	0.40	0.87 (02-01-2023)	1.24 / 3.92	≤3.92
Dimethyl phosphate (DMP)^ (ug/g)	2.24	2.09 (02-01-2023)	9.1 / 33.6	≤33.6
Dimethyldithiophosphate (DMDTP)^ (ug/g)	0.04	0.29 (02-01-2023)	0.67 / 6.12	≤6.12
Dimethylthiophosphate (DMTP)^ (ug/g)	2.43	5.36 (02-01-2023)	5.91 / 33.7	≤33.7

Phthalates

Test Name	Current	Previous	Result (75th / 95th)	Reference
Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)^ (ug/g)	6.73	10.58 (02-01-2023)	14.1 / 37.7	≤37.7
Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)^ (ug/g)	1.15	5.57 (02-01-2023)	8.99 / 23.4	≤23.4
Mono-2-ethylhexyl phthalate (MEHP)^ (ug/g)	0.25	2.51 (02-01-2023)	2.73 / 8.47	≤8.47
Mono-ethyl phthalate (MEtP)^ (ug/g)	12.88	24.22 (02-01-2023)	94.2 / 541	≤541

Volatile organic compounds

Test Name	Current	Previous	Result (75th / 95th)	Reference
2-Hydroxyethyl Mercapturic Acid (HEMA)^ (ug/g)	7.73	12.44 (02-01-2023)	1.7 / 4.75	≤4.75
2-Hydroxyisobutyric Acid (2HIB) (ug/g)	684.94	453.94 (02-01-2023)	795.93 / 1215.72	≤1215.72
2-Methylhippuric Acid (2MHA)^ (ug/g)	38.78	12.31 (02-01-2023)	77.9 / 248	≤248
3-Methylhippuric Acid (3MHA) (ug/g)	1.17	40.98 (02-01-2023)	64.8 / 612.83	≤612.83
4-Methylhippuric Acid (4MHA) (ug/g)	440.84	733.89 (02-01-2023)	65.51 / 752.72	≤752.72
N-Acetyl (2-Cyanoethyl) Cysteine (NACE)^ (ug/g)	3.66	3.46 (02-01-2023)	5.28 / 256	≤256
N-Acetyl (2,Hydroxypropyl) Cysteine (NAHP)^ (ug/g)	4.09	0.81 (02-01-2023)	101 / 403	≤403

Environmental Toxins

Volatile organic compounds

Test Name	Current	Previous	Result (75th / 95th)	Reference
N-Acetyl (3,4-Dihydroxybutyl) Cysteine^ (ug/g)	0.82	261.87 (02-01-2023)	374 / 583	≤583
N-Acetyl (Propyl) Cysteine (NAPR)^ (ug/g)	0.50	9.05 (02-01-2023)	11.3 / 46.1	≤46.1
N-acetyl phenyl cysteine (NAP)^ (ug/g)	0.21	0.33 (02-01-2023)	1.29 / 3.03	≤3.03
Phenyl glyoxylic Acid (PGO)^ (ug/g)	208.59	170.89 (02-01-2023)	285 / 518	≤518

Environmental Toxins

Risk and Limitations

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

Vibrant 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 Vibrant America, a CLIA certified laboratory and utilizes ISO-13485 developed technology. Vibrant America has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific toxin due to circumstances beyond Vibrant's control. Vibrant may re-test a sample in order to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

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.

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