Environmental Toxins

VibrantWellness
Vibrant Wellness | 1360 Bayport Ave, San Carlos, CA 94070
1(866) 364-0963 | support@vibrant-america.com | www.vibrant-wellness.com

PATIENT

NAME:	ENVIRONMENTAL TOXINS DEMO		
DATE OF BIRTH:	01-01-1111	GENDER:	Male
TELEPHONE:	000-000-0000	AGE:	01

ACCESSION ID:	2208200031
SPECIMEN COLLECTED:	2022-08-25
SPECIMEN RECEIVED:	2022-08-26
FINAL REPORT DATE:	2022-08-30

FASTING:	UNKNOWN

PROVIDER:

PRACTICE NAME:	DEMO CLIENT, MD
PROVIDER NAME:	DEMO CLIENT, MD
PHLEBOTOMIST:	0

TELEPHONE:	000-000-0000
FAX #:	
ADDRESS:	1360 Bayport Ave, San Carlos, CA 94070

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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 in your urine. The panel is sub-grouped into Pesticides, Pthalates, Parabens, Acrylic, Alkyl phenols and Volatile Organic Compounds.

Reference ranges are established based on NHANES study where applicable. Other reference ranges are established based on 1000 apparently healthy urine samples.

The report begins with the summary page which lists only the environmental toxins 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 environmental toxins and their absolute levels normalized to Creatinine in a quantile 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 are purely for informational purposes only and should not be considered medical advice. Any changes based on the information should made in consultation with your healthcare 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.

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.

Environmental Toxins Summary

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LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
DEMO	DEMO	Male	01-01-1111	2208200031	2022-08-26

High (>95th percentile)

TEST NAME	CURRENT RESULT	PREVIOUS RESULT	CURRENT RESULT / PREVIOUS RESULT	REFERENCE
2-Hydroxyisobutyric Acid (2HIB)	3018.42		0.01 795 1215	≤1215.72 ug/g
Glyphosate	8.83		0.01 1.65 7.6	≤7.6 ug/g
N-Acetyl (3,4-Dihydroxybutyl) Cysteine	1557.66		0.01 374 583	≤583 ug/g

Moderate (75th-95th percentile)

TEST NAME	CURRENT RESULT	PREVIOUS RESULT	CURRENT RESULT / PREVIOUS RESULT	REFERENCE
Butylparaben	0.88		0.01 0.25 4.39	≤4.39 ug/g
Diphenyl Phosphate (DPP)	1.27		0.01 1.1 3.7	≤3.7 ug/g
mono-(2-ethyl-5-hydroxyhexyl) phthalate	36.96		0.01 14.1 37.7	≤37.7 ug/g
mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	19.9		0.01 8.99 23.4	≤23.4 ug/g
Mono-ethyl phthalate (MEtP)	201.77		0.01 94.2 541	≤541 ug/g
N-Acetyl (2-Cyanoethyl) Cysteine (NACE)	5.37		0.01 5.28 256	≤256 ug/g
N-acetyl phenyl cysteine (NAP)	2.72		0.01 1.29 3.03	≤3.03 ug/g
Triclosan (TCS)	41.59		0.01 29.9 358	≤358 ug/g

Urine Creatinine

TEST NAME	CURRENT RESULT	PREVIOUS RESULT	CURRENT RESULT / PREVIOUS RESULT	REFERENCE
Urine Creatinine	0.94		0.05 0.24 2.16	0.25-2.16 mg/mL

Results are creatinine corrected to account for urine dilution variations. Reference intervals are based upon NHANES(cdc.gov/nhanes) data if available, and are representative of a large population cohort under non-provoked conditions.

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Environmental phenols

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
4-Nonylphenol	0.06		≤2.06 ug/g
Triclosan (TCS)	41.59		≤358 ug/g
Bisphenol A (BPA)	1.25		≤5.09 ug/g

COMMENTS

Triclosan (TCS)

Triclosan (TCS) is an antibacterial and antifungal agent present in some consumer products, including toothpaste, soaps, detergents, toys, and surgical cleaning treatments. Humans are exposed to triclosan through skin absorption when washing hands or in the shower, brushing teeth, using mouthwash, or doing dishes, and through ingestion when swallowed. Additional exposure is possible through ingesting plants grown in soil treated with sewage sludge or eating fish exposed to it. Triclosan has been associated with a higher risk of food allergies. Triclosan has also been found to be a weak endocrine disruptor. Prenatal triclosan exposure was associated with increased cord testosterone levels in the infants.

Herbicides

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
2,4-Dichlorophenoxyacetic Acid (2,4-D)	0.08		≤1.55 ug/g
Atrazine mercapturate	0.01		≤0.05 ug/g
Atrazine	0.01		≤0.05 ug/g
Glyphosate		8.83	≤7.6 ug/g

COMMENTS

Glyphosate

Glyphosate is a broad-spectrum systemic herbicide and crop desiccant. It is used to kill weeds, especially annual broadleaf weeds and grasses that compete with crops. Glyphosate interferes with the shikimate pathway, which exists in plants and microorganisms but not in the genomes of mammals, including humans. Exposure by breathing in spray mist from products containing glyphosate may cause irritation in the nose and throat, nausea, and vomiting. Studies report that glyphosate does not induce sensitization and shows no mutagenic, carcinogenic, or teratogenic activity. Hence, glyphosphate exhibits very low toxicity.

Mitochondrial Marker

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
Tiglylglycine (TG)	0.07		≤3.24 ug/g

Other Markers

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
Diphenyl Phosphate (DPP)	1.27		≤3.7 ug/g
Perchlorate (PERC)	2.1		≤10.7 ug/g
N-acetyl-S-(2-carbamoylethyl)-cysteine	10.07		≤199 ug/g

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Other Markers

COMMENTS

Diphenyl Phosphate (DPP)

Diphenyl phosphate (DPP) is an aryl phosphate ester (APE) used as an industrial catalyst and chemical additive and is the primary metabolite of flame retardant APEs. DPP is used in the manufacture of phosphoric acid diesters such as triphenyl phosphate, trixylenyl phosphate, isodecyl diphenyl phosphate, cresyl diphenyl phosphate and isopropylphenyl diphenyl phosphate. It is widely used as a protective agent for hydroxyl group in organic synthesis. It finds application as an additive for paints and coatings. DPP impacts cardiac development. DPP has the potential to impair mitochondrial function as well as induce renal toxicity, hepatoxicity, and hemotoxicity.

Parabens

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
Butylparaben	0.88		≤4.39 ug/g
Methylparaben	57.43		≤653 ug/g
Ethylparaben	1.44		≤99.3 ug/g
Propylparaben	34.53		≤222 ug/g

COMMENTS

Butylparaben

Butylparaben belongs to the paraben family and is one of the most common antimicrobial preservatives in cosmetics such as such as makeup, moisturizers, hair-care products, and shaving creams. It is also used in medication suspensions, and as a flavoring additive in food. When exposed to high levels of butylparaben via inhalation, irritation to the respiratory tract results; symptoms include coughing and shortness of breath. Ingestion of large doses of butylparaben may cause irritation to the gastrointestinal (GI) tract. Butylparaben is an endocrine disruptor.

Pesticides

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
2,2-bis(4-Chlorophenyl) acetic acid (DDA)	1		≤19 ug/g
Diethyl phosphate (DEP)	0.23		≤15.7 ug/g
Diethylthiophosphate (DETP)	0.66		≤3.92 ug/g
Dimethyldithiophosphate (DMDTP)	0.4		≤6.12 ug/g
3-Phenoxybenzoic Acid (3PBA)	0.37		≤5.44 ug/g
Diethyldithiophosphate (DEDTP)	0.02		≤0.3 ug/g
Dimethyl phosphate (DMP)	3.25		≤33.6 ug/g
Dimethylthiophosphate (DMTP)	3.55		≤33.7 ug/g

Phthalates

TEST NAME	PERCENTILE 75th	PERCENTILE 95th	REFERENCE
mono-(2-ethyl-5-hydroxyhexyl) phthalate	36.96		≤37.7 ug/g
mono-2-ethylhexyl phthalate (MEHP)	0.93		≤8.47 ug/g
mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	19.9		≤23.4 ug/g
Mono-ethyl phthalate (MEtP)	201.77		≤541 ug/g

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Phthalates

COMMENTS

mono-(2-ethyl-5-hydroxyhexyl) phthalate

Mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP) is a metabolite of mono(2-ethylhexyl) phthalate (MEHP), which belongs to the most common environmental toxin phthalates. Phthalates, often known as plasticizers, are a group of chemicals used to make plastics more flexible and harder to break. They are widely used in cosmetics, adhesives, detergents, lubricating oils, automotive plastics, and plastic clothes. People are exposed to phthalates by eating or drinking contaminated foods but also by breathing in air that contains phthalate vapours or dust. Inhaling phthalates can irritate the nose and throat, causing coughing and wheezing, headaches, dizziness, and nausea. MEHHP measured from the blood of pregnant women has been significantly associated with the decreased penis width, shorter anogenital distance, and the incomplete descent of testes of their newborn sons. Phthalates have been classified as endocrine disruptors which may cause reproductive damage, depressed leukocyte function, and even cancer. Phthalate exposure has also been associated with diabetes and insulin resistance, breast cancer, obesity, metabolic disorders, and immune disorders. Phthalate exposure and adverse child neurodevelopment, including autistic behaviours and lower cognitive and motor development, have also been reported.

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Volatile organic compounds

TEST NAME	PERCENTILE (75th / 95th)	REFERENCE	TEST NAME	PERCENTILE (75th / 95th)	REFERENCE
2-Hydroxyethyl Mercapturic Acid (HEMA)	0.79	≤4.75 ug/g	2-Hydroxyisobutyric Acid (2HIB)	3018.42	≤1215.72 ug/g
2-Methylhippuric Acid (2MHA)	20.28	≤248 ug/g	3-Methylhippuric Acid (3MHA)	1.38	≤612.83 ug/g
4-Methylhippuric Acid (4MHA)	45.74	≤752.72 ug/g	N-Acetyl (2-Cyanoethyl) Cysteine (NACE)	5.37	≤256 ug/g
N-Acetyl (2,Hydroxypropyl) Cysteine (NAHP)	0.36	≤403 ug/g	N-Acetyl (3,4-Dihydroxybutyl) Cysteine	1557.66	≤583 ug/g
N-Acetyl (Propyl) Cysteine (NAPR)	4.26	≤46.1 ug/g	N-acetyl phenyl cysteine (NAP)	2.72	≤3.03 ug/g
Phenyl glyoxylic Acid (PGO)	25.17	≤518 ug/g			

COMMENTS

2-Hydroxyisobutyric Acid (2HIB)

2-Hydroxyisobutyric Acid (2HIB) is most often the result of exposure to methyl tertiary-butyl ether (MTBE) or ethyl tertiary butyl ether (ETBE), which are gasoline additives used as octane enhancers. MTBE has been found to pollute large quantities of groundwater when gasoline with MTBE is spilled or leaked at gas stations. In addition, MTBE and ETBE are volatile and may be inhaled or absorbed through the skin by drivers during fueling or from exhaust exposure. Long term exposure to MTBE or ETBE may link to hepatic, kidney, central nervous system toxicity, and even cancer.

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Volatile organic compounds

COMMENTS

N-Acetyl (2-Cyanoethyl) Cysteine (NACE)

N-acetyl (2-cyanoethyl) cysteine (NACE) is a result of exposure to acrylonitrile and NACE is the major metabolite. Acrylonitrile is a colourless liquid with a pungent odor. It is used in the production of acrylic fibers, resins, and rubber. Use of any of these products could lead to exposure to acrylonitrile. Smoking tobacco and cigarettes is another potential exposure. Exposure to acrylonitrile can lead to headaches, nausea, dizziness, fatigue, and chest pains. The European Union has classified acrylonitrile as a carcinogen. Workers exposed to high levels of airborne acrylonitrile are diagnosed more frequently with damage to their lungs, liver, and central nervous system.

N-Acetyl (3,4-Dihydroxybutyl) Cysteine

N-Acetyl (3,4-Dihydroxybutyl) Cysteine (NADB) is a metabolite of 1,3-butadiene, which is important industrially as a monomer in the production of synthetic rubber. Individuals that come into contact with rubber, such as car tires, could absorb up to 1,3 butadiene through the skin. Although butadiene breaks down quickly in the atmosphere, it is nevertheless found in the ambient air in urban and suburban areas as a consequence of its constant emission from motor vehicles. Butadiene has been listed as a carcinogen, and long-term exposure is associated with cardiovascular disease, leukemia, and other cancers.

N-acetyl phenyl cysteine (NAP)

Benzene synthesizes N-acetyl phenyl cysteine (NAP) as a metabolite. Environmentally, benzene is an important solvent. The major sources of benzene exposure are tobacco smoke, automobile service stations, exhaust from motor vehicles, and industrial emissions. Ingestion and dermal absorption of benzene can also result from contact with contaminated water. Benzene may cause drowsiness, dizziness, rapid or irregular heartbeat, and headaches in people who breathe it in. Long term exposure to benzene may increase the risk of cancer, aplastic anemia, bone marrow failure, acute leukemia, and cardiovascular disease. Benzene is extremely toxic and targets the liver, kidney, lung, heart, and brain as well as causing DNA strand breaks and chromosomal damage. Benzene and its metabolites induce oxidative stress, which causes genomic instability through DNA damage. Changes to genomic stability have been linked to aging. Thus, NAP toxicity may accelerate aging owing to its contribution to genomic instability, which is a hallmark of aging.

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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.

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. 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 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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