TEST2 PATIENT
09/23/2002

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

PATIENT

NAME: **TEST2 PATIENT** GENDER: **Male**
DATE OF BIRTH: **09/23/2002** AGE: **19**

, SAN CARLOS, CA- 94070.

ACCESSION ID: **2111290002**
SPECIMEN COLLECTION TIME: **11-28-2021 11:10**
SPECIMEN RECEIVED TIME: **11-29-2021 05:10**
FINAL REPORT TIME: **11-29-2021 17:36**
FASTING: **FASTING**

PROVIDER

PRACTICE NAME: **Vibrant IT4 Practice**
PROVIDER NAME: **Demo Client, DDD (999994)**
ADDRESS: **TEST STREET, TEST CITY, KY- 42437.**

The comments in this report are meant only for informational purposes and do not constitute medical advice.
Please consult your physician for any medication, treatment or life style management.

Vibrant Wellness Test Index

Toxins Summary

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ADDRESS: **TEST STREET, TEST CITY, KY- 42437.**

Toxins Summary Blank Cell - Low ● High ● Moderate - Not Ordered or N/A

		Current	Previous Result
Environmental Toxins	Organochlorine pesticides		
	Organophosphate pesticides		
	Other pesticides/herbcides		
	Phthalate Metabolites	Mono-ethyl phthalate (MEtP) ●	
	Parabens	Methylparaben ●	
	Acrylic Metabolites		
	Other Metabolites		
	Alkylphenol	Bisphenol A (BPA) ●	Bisphenol A (BPA) ●
	Volatile Organic Compounds (VOCs)	Phenylglyoxylic Acid (PGO) ●	
	Urine Creatinine	Creatinine ●	
Mycotoxins V2	Aflatoxin	Aflatoxin M1 ●, Aflatoxin B1 ●, Aflatoxin B2 ●	
	Other	Ochratoxin A ●, Patulin ●, Dihydrocitrinone ●, Sterigmatocystin ●, Zearalenone ●, Fumonisins B1 ●, Fumonisins B3 ●, Citrinin ●, Mycophenolic Acid ●	Zearalenone ●
	Trichothecenes	Roridin E ●, Verrucarin A ●, Deoxynivalenol (Vomitoxin/DON) ●, Nivalenol (NIV) ●, diacetoxyscirpenol (DAS) ●, T-2 toxin ●, Satratoxin G ●, Satratoxin H ●, Isosatratoxin F ●, Roridin A ●, Roridin H ●, Roridin L-2 ●	Verrucarin A ●, T-2 toxin ●, Satratoxin G ●, Satratoxin H ●, Isosatratoxin F ●
	Urinary Creatinine	Urine Creatinine ●	Urine Creatinine ●
Heav	Heavy Metals (Creatinine)	Urine Creatinine ●, Antimony ●, Beryllium ●, Cadmium ●,	Urine Creatinine ●, Antimony ●, Beryllium ●, Cadmium ●,

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ADDRESS: **TEST STREET, TEST CITY, KY- 42437.**

Toxins Summary	Blank Cell - Low	● High	● Moderate	- Not Ordered or N/A

		Current	Previous Result
y Metals		Gadolinium ●, Lead ●, Mercury ●, Palladium ●, Platinum ●, Tellurium ●, Thallium ●, Thorium ●, Tungsten ●, Uranium ●	Gadolinium ●, Mercury ●, Palladium ●, Platinum ●, Tellurium ●, Thallium ●, Thorium ●, Tungsten ●, Uranium ●

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PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

PATIENT

Name: TEST2 PATIENT
Date of Birth: 2002-09-23
Gender: Male
Age: 19

City: SAN CARLOS
State: CA Zip #: 94070

Fasting: FASTING

PROVIDER

Practice Name: Vibrant IT4 Practice
Provider Name: Demo Client, DDD (999994)
Street Address: TEST STREET
City: TEST CITY
State: KY
Zip #: 42437
Telephone #:
Fax #: 000-000-0000

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LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Heavy Metals (Creatinine)

Test name	In Control	High Risk	In Control Range	High Risk Range	Previous (10/29/2021)
Urine Creatinine (mg/ml)		4.54	0.25~2.16	≤0.24 ≥2.17	7.69
Aluminum (ug/g)	5.89		≤54.00	≥54.01	3.56
Antimony (ug/g)		4.18	≤0.78	≥0.79	6.87
Arsenic (ug/g)	5.95		≤116.00	≥116.01	4.84
Barium (ug/g)	6.24		≤6.90	≥6.91	4.57
Beryllium (ug/g)		6.41	≤0.90	≥0.91	5.71
Bismuth (ug/g)	6.81		≤14.90	≥14.91	5.74
Cadmium (ug/g)		4.56	≤1.50	≥1.51	5.75
Cesium (ug/g)	6.72		≤9.90	≥9.91	5.77
Gadolinium (ug/g)		6.64	≤0.39	≥0.40	4.77
Lead (ug/g)		4.84	≤4.40	≥4.41	3.06
Mercury (ug/g)		4.29	≤3.90	≥3.91	5.02
Nickel (ug/g)	3.54		≤11.90	≥11.91	5.60
Palladium (ug/g)		3.77	≤0.20	≥0.21	3.66
Platinum (ug/g)		5.79	≤0.99	≥1.00	7.38
Tellurium (ug/g)		6.72	≤0.79	≥0.80	7.04
Thallium (ug/g)		7.35	≤0.80	≥0.81	4.83
Thorium (ug/g)		4.18	≤0.50	≥0.51	6.94
Tin (ug/g)	4.99		≤9.90	≥9.91	3.24
Tungsten (ug/g)		3.68	≤0.99	≥1.00	3.90
Uranium (ug/g)		7.22	≤0.13	≥0.14	7.72

Specimen Information

Provoking Status: UNKNOWN	Agent:
	Dosage:
Urine Volume: 1.4L L	Estimated: ESTIMATED

** Reference intervals are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.*

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City: TEST CITY
State: KY
Zip #: 42437
Telephone #:
Fax #: 000-000-0000

Vibrant Wellness is pleased to present to you, '**Mycotoxins**', 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 Mycotoxins 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

Interpretation of Report: The report begins with the Mycotoxins summary page which lists only the mycotoxins whose levels are high or moderate in the reference range. Following this section is the complete list of the mycotoxins along with the corresponding species and their levels normalized to urinary creatinine, in a tabular form to enable a full overview along with the reference ranges. The level of the mycotoxin has a green, yellow or red highlight around the cell indicating – Mild (Low mold diet intake), Moderate or High exposure to the particular mycotoxin. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered.
Additionally, the previous value is also indicated to help check for improvements every time the test is ordered.Urine tests measure analytes by one of two ways:
1) Ratio of analytes as compared to urine volume: Urine tests that measure analytes by ratio compared to urine volume can be influenced by hydration- both under-hydration or over-hydration.
2) Ratio of analytes as compared to creatinine concentration: Urine tests that measure analytes by creatine concentration will not be altered by urine volume or hydration status. The results are calculated according to the concentration of creatinine, which will not be altered by urine volume or the time of testing.
No rejection criteria are established for high or low creatinine levels. As long as the creatinine is within the reportable range, results will be calculated to the creatinine concentration. Low or high creatinine levels will not skew results.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the Mycotoxins 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 - It is important that you discuss any modifications to your diet, exercise and nutritional supplementation with your physician before making any changes.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Mycotoxins Summary

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Mycotoxins - High

Test Name	Species Name	In Control	Moderate	High	Current Level	Previous Level (10/29/2021)
Aflatoxin M1 (ng/g)	Aspergillus	≤4.80	4.81~9.60	≥9.61	>5928.00	0.90
Aflatoxin B1 (ng/g)	Aspergillus	≤5.20	5.21~10.40	≥10.41	20.00	0.79
Aflatoxin B2 (ng/g)	Aspergillus	≤6.10	6.11~12.20	≥12.21	13.00	0.44
Sterigmatocystin (ng/g)	Aspergillus, Penicillium, Bipolaris	≤0.40	0.41~0.80	≥0.81	22.00	0.32
Zearalenone (ng/g)	Fusarium	≤0.50	0.51~1.00	≥1.01	9.92	21.00
Fumonisins B1 (ng/g)	Fusarium	≤4.60	4.61~9.20	≥9.21	16.00	0.12
Fumonisins B3 (ng/g)	Fusarium	≤8.10	8.11~16.20	≥16.21	24.00	0.12
Citrinin (ng/g)	Penicillium	≤9.40	9.41~18.80	≥18.81	24.00	0.68
Mycophenolic Acid (ng/g)	Aspergillus, Penicillium	≤4.80	4.81~9.60	≥9.61	3536.00	0.19
Roridin E (ng/g)	Fusarium, Myrothecium, Stachybotrys	≤1.00	1.01~2.00	≥2.01	14.00	0.87
Verrucarin A (ng/g)	Fusarium, Myrothecium, Stachybotrys	≤1.00	1.01~2.00	≥2.01	8.40	4.00
Deoxynivalenol (Vomitoxin/DON) (ng/g)	Fusarium	≤50.60	50.61~101.20	≥101.21	109.00	0.27
Nivalenol (NIV) (ng/g)	Fusarium	≤2.40	2.41~4.80	≥4.81	14.00	<0.05
diacetoxyscirpenol (DAS) (ng/g)	Fusarium	≤3.20	3.21~6.40	≥6.41	19.00	0.45
T-2 toxin (ng/g)	Fusarium	≤0.10	0.11~0.30	≥0.31	20.00	0.22
Satratoxin G (ng/g)	Stachybotrys chartarum	≤0.10	0.11~0.30	≥0.31	6.00	9.53
Satratoxin H (ng/g)	Stachybotrys chartarum	≤0.10	0.11~0.30	≥0.31	7.00	0.71
Isosatratoxin F (ng/g)	Stachybotrys chartarum	≤0.10	0.11~0.30	≥0.31	1.00	0.94
Roridin A (ng/g)	Stachybotrys chartarum	≤5.70	5.71~11.40	≥11.41	22.00	0.28
Roridin H (ng/g)	Stachybotrys chartarum	≤6.30	6.31~12.60	≥12.61	19.00	0.31
Roridin L-2 (ng/g)	Stachybotrys chartarum	≤5.10	5.11~10.20	≥10.21	11.00	2.67
Urine Creatinine (mg/ml)		0.25~2.16		≤0.24 ≥2.17	6.55	10.90

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Mycotoxins - Moderate

Test Name	Species Name	In Control	Moderate	High	Current Level	Previous Level (10/29/2021)
Ochratoxin A (ng/g)	Aspergillus, Penicillium	≤5.10	5.11~10.20	≥10.21	8.00	0.71
Patulin (ng/g)	Penicillium	≤8.70	8.71~17.40	≥17.41	17.00	0.55
Dihydrocitrinone (ng/g)	Aspergillus, Penicillium, Monascus	≤12.40	12.41~24.80	≥24.81	15.00	0.24

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Mycotoxins Complete List

Aflatoxin

Test Name (ng/g)	Species Name	In Control	Moderate	High	Current Level	Previous Level (10/29/2021)
Aflatoxin M1	Aspergillus	≤4.80	4.81~9.60	≥9.61	>5928.00	0.90
Aflatoxin B1	Aspergillus	≤5.20	5.21~10.40	≥10.41	20.00	0.79
Aflatoxin B2	Aspergillus	≤6.10	6.11~12.20	≥12.21	13.00	0.44
Aflatoxin G1	Aspergillus	≤4.90	4.91~9.80	≥9.81	<0.05	7.66
Aflatoxin G2	Aspergillus	≤8.10	8.11~16.20	≥16.21	5.00	0.12

Comments

Aflatoxin M1
Aflatoxins are secondary metabolites produced by different strains Aspergillus species, widely found as contaminants in a great variety of crops—cereals, oilseeds, tree nuts and spices. Among these toxins, Aflatoxin M1 (AFM1) is the principal hydroxylated aflatoxin metabolite of Aflatoxin B1 (AFB1), the most recurrent and most harmful aflatoxin present in the milk of dairy cows fed a diet contaminated with AFB1. Carry-over of AFB1 as AFM1 in the milk of dairy cows has been established to range from 0.3% to 6.2%. Due to the high stability of AFM1 towards milk processing technologies, such as pasteurization, ultra-high temperature heating (UHT), and other processing methods, this mycotoxin can be found not only in milk, but also in dairy products, usually at higher concentration than that found in raw milk. In addition, AFM1 is found in human breast milk too. This mycotoxin has become a real public health concern, especially for infants and young children. It is considered that infants are more exposed to AFM1 contamination by breast milk intake than that using infant formula.[1] Moreover, international agency for research on cancer (IARC) classified AFB1 and AFM1 as human carcinogens belonging to Group 1 and Group 2B, respectively.[2]

Aflatoxin B1
Aflatoxin B1 (AFB1) is produced by many strains of Aspergillus fungi. Aflatoxin B1 is the most potent natural carcinogen known and is usually the major aflatoxin produced by toxigenic strains. Aflatoxin B1 is one of the most potent liver carcinogens known and has been associated as a cocarcinogen with hepatitis B in the high incidence of human liver cancer. Warm temperatures, high humidity, and plant injuries, in the field and during storage, promote both the growth of the fungi and aflatoxin production. The greatest threat to public health is from contaminated peanuts, cottonseed, maize, and rice. AFB1 is a potent toxin, mutagen, and carcinogen, and is implicated in the etiology of hepatocarcinoma. Although the liver is the major site of injury, AFB1-induced tumors have been experimentally produced in the lungs, kidneys, and colons of rodents.

Aflatoxin B2
Aflatoxin B2 is a naturally occurring mycotoxin produced by species of the mold Aspergillus, which can be found in legumes, corn, soybeans, rice, milk, and cheese. The highest levels of aflatoxin contamination are always associated with postharvest spoilage, when commodities are stored with an inappropriate moisture content and temperature. However, te aflatoxin contamination is not simply a problem of poor storage but can occur in the field before the crop is harvested. The spores of these species of Aspergillus can land on the stigma of the developing plant, germinate and penetrate to the immature seed tissue just as if they were pollen grains. The mold can establish an endophytic growth within the tissues of the plant without causing any perceptible harm to the plant.

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Other

Test Name (ng/g)	Species Name	In Control	Moderate	High	Current Level	Previous Level (10/29/2021)
Ochratoxin A	Aspergillus, Penicillium	≤5.10	5.11~10.20	≥10.21	8.00	0.71
Sterigmatocystin	Aspergillus, Penicillium, Bipolaris	≤0.40	0.41~0.80	≥0.81	22.00	0.32
Zearalenone	Fusarium	≤0.50	0.51~1.00	≥1.01	9.92	21.00
Enniatin B1	Fusarium	≤0.10	0.11~0.40	≥0.41	<0.05	0.65
Fumonisins B1	Fusarium	≤4.60	4.61~9.20	≥9.21	16.00	0.12
Fumonisins B2	Fusarium	≤5.40	5.41~10.80	≥10.81	4.00	0.87
Fumonisins B3	Fusarium	≤8.10	8.11~16.20	≥16.21	24.00	0.12
Citrinin	Penicillium	≤9.40	9.41~18.80	≥18.81	24.00	0.68
Patulin	Penicillium	≤8.70	8.71~17.40	≥17.41	17.00	0.55
Gliotoxin	Aspergillus	≤155.90	155.91~311.80	≥311.81	23.00	0.64
Mycophenolic Acid	Aspergillus, Penicillium	≤4.80	4.81~9.60	≥9.61	3536.00	0.19
Dihydrocitrinone	Aspergillus, Penicillium, Monascus	≤12.40	12.41~24.80	≥24.81	15.00	0.24
Chaetoglobosin A	Chaetomium globosum	≤23.90	23.91~47.80	≥47.81	<0.05	0.92

Comments

Ochratoxin A

Members of the ochratoxin A have been found as metabolites of many different species of Aspergillus and Penicillium. The level of Ochratoxin A production also influenced by the substrate on which the molds grow as well as the moisture level, temperature, and presence of competitive microflora interact to influence the level of toxin produced. Ochratoxin A has been found in barley, oats, rye, wheat, coffee beans, and other plant products, with barley having a particularly high likelihood of contamination. Ochratoxin has been detected in blood and other animal tissues and in milk, including human milk. Ochratoxin A is a nephrotoxin to all animal species studied to date and is most likely toxic to humans, who have the longest half-life for its elimination of any of the species. It is frequently found in pork intended for human consumption. Ochratoxin is believed to be responsible for a porcine nephropathy that has been studied intensively in the Scandinavian countries. The disease is endemic in Denmark, where rates of porcine nephropathy and ochratoxin contamination in pig feed are highly correlated. In addition to being a nephrotoxin, animal studies indicate that ochratoxin A is a liver toxin, an immune suppressant, a potent teratogen, and a carcinogen.[3]

Sterigmatocystin

Sterigmatocystin, a related dihydrofuran toxin, is a late metabolite in the aflatoxin pathway and is also produced as a final biosynthetic product by a number of species such as Aspergillus Penicillium, and Bipolaris. STC is a possible human carcinogen (2B) according to IARC classification and showed immunotoxic and immunomodulatory activity, together with mutagenic effects. It might be found in numerous substrates, from foods and feeds to chronically damp building materials and indoor dust. Due to the structural similarities, aflatoxins and STC share relevant toxic effects, including genotoxicity and carcinogenicity. However, in contrast to aflatoxins, only limited information on occurrence and toxicity of STC is available. Liver and kidneys are the target organs of acute toxicity of STC. However, the acute oral toxicity is relatively low (range between 120 and 166 mg/kg body weight).[4]

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Zearalenone
Zearalenone (ZEA) is a non-steroidal estrogenic mycotoxin. It is produced principally by Fusarium molds, and consequently occurs wherever DON occurs, most notably as a contaminant of maize, wheat, barley, oats, rye, sorghum, millet, and rice. ZEA and its metabolites can bind to estrogen receptors, resulting in various changes in the reproductive organs. In addition, however, ZEA is a competitive substrate for enzymes involved in steroid synthesis and metabolism and therefore has the potential to act as an endocrine disruptor.[5]

Fumonisins B1
Fusarium is one of the most prevalent fungi associated with contamination of corn and other agricultural products throughout the world. Many different fumonisins have so far been reported, and they have been grouped into four main categories (A, B, C, and P). The most abundant of the fumonisins is fumonisin B1 (FB1). They can also be found in moisture-damaged buildings, and, therefore, exposure of humans to Fusarium mycotoxins including FB1 may take place. FB1 bears a clear structural similarity to the cellular sphingolipids, and this similarity has been shown to disturb the metabolism of sphingolipids by inhibiting a key enzyme in sphingolipid biosynthesis. FB1 is neurotoxic, hepatotoxic, and nephrotoxic in animals, and it has been classified as a possible carcinogen to humans. The cellular mechanisms behind FB1-induced toxicity include the induction of oxidative stress, apoptosis, and cytotoxicity, as well as alterations in cytokine expression.[9]

Fumonisins B3
Fumonisin B3 is a mycotoxin produced mainly by Fusarium, that belong to Fumonisins family, one of the most prevalent fungi of maize based crops. Fumonisin B3 is third most abundant fumonisin found in contaminated maize. However, FB3 is less toxic than FB1 and FB2.[9]

Citrinin
Citrinin (CTN) is a nephrotoxic mycotoxin mainly produced by Penicillium although other genera such as Aspergillus and Monascus are also known to produce these toxins. CTN occurs in different plant products, especially in grains, and also in beans, fruit, vegetables, herbs and spices. Often, the co-occurrence with other mycotoxins is observed, especially ochratoxin A (OTA). It is a known fact that CTN occurs during fermentation of red mould rice as a secondary metabolite of Monascus purpureus. Red mould rice has been used for lowering lipoprotein levels in blood and also as a food dye for centuries. Besides its nephrotoxicity, which has been proved by various studies, there is also proof that CTN is involved in induction of apoptosis through oxidative stress, although the precise regulatory mechanism is yet to be determined.[10]

Patulin
Patulin is a toxic chemical contaminant produced by several species of mold, especially within Aspergillus, Penicillium and Byssochlamys. Penicillium expansum, the blue mold that causes soft rot of apples, pears, cherries, and other fruits, is recognized as one of the most common offenders in patulin contamination.3 It is the most common mycotoxin found in apples and apple-derived products such as juice, cider, compotes and other food intended for young children. Exposure to this mycotoxin is associated with immunological, neurological and gastrointestinal outcomes.11 Several studies have revealed its mutagenicity, teratogenicity, chromosomal aberration, DNA strand damage, and micronuclei formation in mammalian cells. However, pieces of evidence for the carcinogenic potential of PAT in the animal model are not sufficient. Based on the available data, the presence of PAT can be used as a quality control parameter, as its detection in apple derived food such as juices, ciders and concentrates indicated that moldy apples were used in the production of juices and the accumulation of PAT within the body may pose toxicological threats. For this reason, the problem of detecting even low levels of PAT in apple juices continues to receive attention. Because apple juice is such a popular beverage and the possibility for life-long exposure exists, PAT will likely remain important to apple processors and governments interested in monitoring the quality of apple juices and products.[12]

Mycophenolic Acid
Mycophenolic Acid (MPA) is a mycotoxin produced by a number of Penicillium species. Penicillium brevicompactum, a species able to produce mycophenolic acid (MPA), has also been frequently identified in indoor environments that can be found on building materials, in dust, and in air samples.[16] It usually suppresses the immune system by inhibiting the proliferation of B and T lymphocytes.

Dihydrocitrinone
Dihydrocitrinone (DH-CIT) is the main metabolite of Citrinin (CTN), a mycotoxin produced mainly by Penicillium and also by Aspergillus. In vitro study have shown that DH-CIT is clearly less cytotoxic compared to parental CTN.[17] CTN mainly act as a nephrotoxic.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Trichothecenes

Test Name (ng/g)	Species Name	In Control	Moderate	High	Current Level	Previous Level (10/29/2021)
Roridin E	Fusarium, Myrothecium, Stachybotrys	≤1.00	1.01~2.00	≥2.01	14.00	0.87
Verrucarin A	Fusarium, Myrothecium, Stachybotrys	≤1.00	1.01~2.00	≥2.01	8.40	4.00
Deoxynivalenol (Vomitoxin/DON)	Fusarium	≤50.60	50.61~101.20	≥101.21	109.00	0.27
Nivalenol (NIV)	Fusarium	≤2.40	2.41~4.80	≥4.81	14.00	<0.05
diacetoxyscirpenol (DAS)	Fusarium	≤3.20	3.21~6.40	≥6.41	19.00	0.45
T-2 toxin	Fusarium	≤0.10	0.11~0.30	≥0.31	20.00	0.22
Satratoxin G	Stachybotrys chartarum	≤0.10	0.11~0.30	≥0.31	6.00	9.53
Satratoxin H	Stachybotrys chartarum	≤0.10	0.11~0.30	≥0.31	7.00	0.71
Isosatratoxin F	Stachybotrys chartarum	≤0.10	0.11~0.30	≥0.31	1.00	0.94
Roridin A	Stachybotrys chartarum	≤5.70	5.71~11.40	≥11.41	22.00	0.28
Roridin H	Stachybotrys chartarum	≤6.30	6.31~12.60	≥12.61	19.00	0.31
Roridin L-2	Stachybotrys chartarum	≤5.10	5.11~10.20	≥10.21	11.00	2.67
Verrucarin J	Stachybotrys chartarum	≤6.90	6.91~13.80	≥13.81	3.35	4.00

Comments

Roridin E
Roridin E is a well-known macrocyclic trichothecene mycotoxin produced by various species of Fusarium, Myrothecium, Trichoderma, Trichothecium, Cephalosporium, Verticimonosporium, and Stachybotrys. They are produced on many different grains like wheat, oats or maize by various Fusarium species. Some molds that produce trichothecene mycotoxins, such as Stachybotrys chartarum, can grow in damp indoor environments and may contribute to health problems among building occupants.[6]

Verrucarin A
Verrucarin A is macrocyclic trichothecenes are produced largely by Myrothecium, Stachybotrys and Fusarium. This toxin has a wide range of antiviral, antifungal and antibacterial activity. Trichothecenes are generally produced on many different grains like wheat, oats or maize. In early days, these macrocyclic trichothecene compounds structures were modified to create new anticancer agents.[7]

Deoxynivalenol (Vomitoxin/DON)
Deoxynivalenol (DON), also known as Deoxynivalenol, a tricothecene mycotoxin, is produced by several species of Fusarium. DON has been associated with outbreaks of acute gastrointestinal illness in humans. The FDA advisory level for DON for human consumption is 1 ppm.

Nivalenol (NIV)
Produced by the mold genus Fusarium, the type B trichothecenes, nivalenol (NIV) and their acetylated precursors are often contaminating cereal staples, posing a potential threat to public health that is still incompletely understood. Trichothecenes are very resistant to milling and processing, they can enter human food products easily. NIV is not found in food as commonly as DON; however, it demonstrates higher toxicity in animal studies. The toxicity of NIV is often compared to the toxicity of DON; however, the amount of toxicological data on NIV impact is much lower compared to DON.[19]

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

diacetoxyscirpenol (DAS)
Diacetoxyscirpenol (DAS), also known as anguidine, is a type A trichothecene mycotoxin primarily produced by Fusarium fungi. Trichothecenes are known as major contaminants of cereals and cereal-containing foods. DAS has been detected in agricultural products worldwide and persists in products after processing. In human as well as in animals, DAS consumption has been shown to induce haematological disorders (neutropenia, aplastic anemia). In the published literature, DAS has mainly been reported in various cereal grains (principally wheat, sorghum, maize, barley and oats) and cereal products, but also in potato products, soybeans and coffee. The highest levels have been reported for wheat, sorghum and coffee. DAS has been found to co-occur with many other mycotoxins in grains and grain-based products, in particular Fusarium toxins including type A and B trichothecenes, and zearalenone.[20]

T-2 toxin
T-2 Toxin is a tricothecene produced by species of Fusarium and is one of the rare and deadlier toxins. If ingested in sufficient quantity, T-2 toxin can severely damage the entire digestive tract and cause rapid death due to internal hemorrhage. T-2 has been implicated in the human diseases alimentary toxic aleukia and pulmonary hemosiderosis. Damage caused by T-2 toxin is often permanent.

Satratoxin G
Satratoxin G is a macrocyclic trichothecene mycotoxin produced by commonly called black mold or Stachybotrys chartarum, that contribute to disorders associated with water-damaged buildings. They are potent inhibitors of protein translation that initiate both inflammatory gene expression and apoptosis in vitro after upstream activation of mitogen-activated protein kinases (MAPKs). These water-soluble mycotoxins could produce airborne particles which could facilitate entry and release into respiratory airway tissue that may selectively induce apoptosis in olfactory sensory neurons in the nose (rhinitis) and brain(mild focal encephalitis).[21]

Satratoxin H
Satratoxin H is a trichothecene mycotoxin that have been recognized as one of the potential etiologic agents in outbreaks of sick building syndromes. satratoxin H, potently inhibit protein synthesis and thymocyte proliferation and also can cause diseases such as an immune dysfunction and idiopathic pulmonary hemorrhage in infants. Recent studies have shown a possible relationship between trichothecenes and disorders of central nervous system including severe neuronal death.[22]

Isosatratoxin F
Isosatratoxin F is another trichothecene produced by Stachybotrys chartarum. Several animal studies have shown that isosatratoxin F can cause nasal and pulmonary toxicity when administered intranasally or intratracheally. They showed that pulmonary alveolus cells were injured following intratracheal instillation of isosatratoxin F with marked changes in surfactant synthesis and secretion.[23]

Roridin A
Roridin A mycotoxin is one of the important macrocyclic trichothecenes, produced on foodtuffs such as corn, rice, wheat and other crops. Trichothecences mycotoxins prevent polypeptide chain initiation or elongation and interact with the enzyme peptidyl transferase. Both human and animal suffer from several pathologies due to intoxication after consumption of foodstuffs contaminated with trichothecences and the conditions have been named differently according to the causative fungus.[24]

Roridin H
Roridin H is produced mainly by Stachybotrys and categorized as a trichothecene mycotoxin. There are reports showing the involvement of these trichothecene in the development of 'sick building syndrome'. These trichothecenes were found in air samples in the ventilation systems of private houses and office buildings, and on the walls of houses with high humidity. The symptoms of airborne toxicosis disappeared when the buildings and ventilation systems were thoroughly cleaned.[25]

Roridin L-2
Roridin L2 is the putative biosynthetic precursor of Satratoxin G. It is a common trichothecene produced by S. chartarum isolates from water-damaged homes. Due to sturctural differences, roridin L2 possesses little in vitro or in vivo toxic activity as compared to SG.[26]

Urinary Creatinine

Test Name (mg/ml)	Species Name	In Control	Moderate	High	Current Level	Previous Level (10/29/2021)
Urine Creatinine		0.25~2.16		≤0.24 ≥2.17	6.55	10.90

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Key Terms/Glossary

Mycotoxin	A toxic substance produced by a fungus
Antibacterial Compound	A compound active against bacteria to kill or remove them from the body
Antihelmintic Compound	A group of antiparasitic drugs that expel parasitic worms (helminths) and other internal parasites from the body by either stunning or killing them and without causing significant damage to the host.
Antifungal	A pharmaceutical fungicide or fungistatic used to treat and prevent mycosis.
Detoxification	Physiological or medicinal process of removal of toxic substances from a living organism, including the human body
Sick building syndrome	Medical condition where people in a building suffer from symptoms of illness or feel unwell for no apparent reason
Hepatocarcinoma	The most common primary liver tumor
Antischistosomal	An agent capable of affecting the viability of schistosomes
Sequestering agent	Nonabsorbable material capable of binding toxins in the gastrointestinal tract and reducing enterohepatic recirculation and ultimately the body burden of toxins.

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Risk and Limitations

This test has been developed and its performance characteristics determined by Vibrant America LLC., 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 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 mycotoxin 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.

Vibrant Wellness makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Vibrant Wellness 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.

Final Report Date:	11-29-2021 17:36	**Specimen Collected:**	11-29-2021 11:10
Accession ID:	2111290002	**Specimen Received:**	11-29-2021 05:10

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

PATIENT

Name: TEST2 PATIENT
Date of Birth: 2002-09-23
Gender: Male
Age: 19

City: SAN CARLOS
State: CA Zip #: 94070

Fasting: FASTING

PROVIDER

Practice Name: Vibrant IT4 Practice
Provider Name: Demo Client, DDD (999994)
Street Address: TEST STREET
City: TEST CITY
State: KY
Zip #: 42437
Telephone #:
Fax #: 000-000-0000

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.

Interpretation of Report: The report begins with the summary page which lists only the toxins are high or moderate in comparison to the reference range. Following the summary section is the complete list of the environmental toxins along with the levels in a tabular form to enable a full overview along with the corresponding reference ranges. The level of the toxin has a green, yellow or red highlight around the cell indicating – Mild, Moderate or High levels in comparison to our reference population. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. 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.
Additionally, the previous value is also indicated to help check for improvements every time the test is ordered.Urine tests measure analytes by one of two ways:
1) Ratio of analytes as compared to urine volume: Urine tests that measure analytes by ratio compared to urine volume can be influenced by hydration- both under-hydration or over-hydration.
2) Ratio of analytes as compared to creatinine concentration: Urine tests that measure analytes by creatine concentration will not be altered by urine volume or hydration status. The results are calculated according to the concentration of creatinine, which will not be altered by urine volume or the time of testing.
No rejection criteria are established for high or low creatinine levels. As long as the creatinine is within the reportable range, results will be calculated to the creatinine concentration. Low or high creatinine levels will not skew results.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the environmental toxins 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 for medication, treatment, diet, exercise or lifestyle management as appropriate. This product is not intended to diagnose, treat, or cure any disease or condition.

Please Note - Pediatric ranges have not been established for this test.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Environmental Toxins Summary

Environmental Toxins - High

Test Name	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Methylparaben (mcg/g)	≤220.00	220.01~849.99	≥850.00	975.00	112.00
Bisphenol A (BPA) (mcg/g)	≤3.20	3.21~10.80	≥10.81	12.80	28.40
Phenylglyoxylic Acid (PGO) (mcg/g)	≤105.60	105.61~387.89	≥387.90	488.00	4.50
Creatinine (mg/ml)	0.25~2.16		≤0.24 ≥2.17	0.05	1.77

Environmental Toxins - Moderate

Test Name	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Mono-ethyl phthalate (MEtP) (mcg/g)	≤305.00	305.01~1478.22	≥1478.23	486.80	2.30

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Environmental Toxins Complete List

Organochlorine pesticides

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
2,4-Dichlorophenoxyacetic Acid (2,4-D)	≤0.30	0.31~2.34	≥2.35	<0.01	3.63
Perchlorate	≤2.50	2.51~16.19	≥16.20	2.46	14.08
DDA	≤9.50	9.51~28.79	≥28.80	2.95	8.19

Organophosphate pesticides

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Diethyldithiophosphate (DEDTP)	≤0.20	0.21~0.48	≥0.49	0.02	4.19
Dimethyldithiophosphate (DMDTP)	≤0.80	0.81~5.08	≥5.09	0.29	5.75
Diethylthiophosphate (DETP)	≤0.70	0.71~2.76	≥2.77	0.17	7.49
Dimethylphosphate (DMP)	≤5.20	5.21~37.19	≥37.20	0.19	3.11
Diethylphosphate (DEP)	≤0.80	0.81~12.59	≥12.60	0.76	3.50
Dimethylthiophosphate (DMTP)	≤4.60	4.61~29.20	≥29.21	4.20	9.82
Atrazine	≤0.02	0.03~0.05	≥0.06	<0.01	7.16
Atrazine mercapturate	≤0.03	0.04~0.06	≥0.07	0.03	7.04

Other pesticides/herbcides

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Glyphosate	≤0.75	0.76~2.29	≥2.30	0.10	19.76
3-Phenoxybenzoic Acid (3PBA)	≤0.57	0.58~6.39	≥6.40	0.51	29.33

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Phthalate Metabolites

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Monoethyl Phthalate (MEP)	≤5.90	5.91~678.89	≥678.90	5.78	29.96
mono-2-ethylhexyl phthalate (MEHP)	≤5.00	5.01~23.89	≥23.90	4.77	3.20
mono-(2-ethyl-5-hydroxyhexyl) phthalate (MEHHP)	≤42.00	42.01~168.99	≥169.00	15.11	4.85
mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)	≤20.00	20.01~109.99	≥110.00	13.71	7.83
Mono-ethyl phthalate (MEtP)	≤305.00	305.01~1478.22	≥1478.23	486.80	2.30

Comments

Parabens

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Methylparaben	≤220.00	220.01~849.99	≥850.00	975.00	112.00
Propylparaben	≤45.00	45.01~247.89	≥247.90	31.94	5.07
Butylparaben	≤1.00	1.01~22.62	≥22.63	0.41	4.09
Ethylparaben	≤6.10	6.11~82.17	≥82.18	0.05	7.64

Comments

Methylparaben belongs to the paraben family and is an anti-fungal agent often used in a variety of cosmetics and personal-care products. It is also used as a food preservative. Methylparaben is generally recognized as safe (GRAS) by the USFDA for food and cosmetic antibacterial preservation. Methylparaben is readily absorbed from the gastrointestinal tract or through the skin. Studies indicate that methylparaben applied on the skin may react with UVB, leading to increased skin aging and DNA damage.

Acrylic Metabolites

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
N-acetyl-S-(2-carbamoylethyl)-cysteine (NAE)	≤10.20	10.21~178.59	≥178.60	2.80	4.23
N-Acetyl (2-Cyanoethyl) Cysteine (NACE)	≤11.80	11.81~260.49	≥260.50	4.04	4.18

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Other Metabolites

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
N-Acetyl (2,Hydroxypropl) Cysteine (NAHP)	≤5.00	5.01~429.99	≥430.00	4.35	9.38
N-Acetyl (3,4-Dihydroxybutyl) Cysteine (NADB)	≤7.50	7.51~478.29	≥478.30	2.27	6.83
2-Hydroxyethyl Mercapturic Acid (HEMA)	≤1.00	1.01~4.79	≥4.80	0.31	9.66
N-Acetyl Propyl Cysteine (NAPR)	≤5.00	5.01~49.99	≥50.00	0.72	5.94
Diphenyl Phosphate (DPP)	≤1.30	1.31~6.09	≥6.10	0.27	1.62
Tiglylglycine (TG)	≤0.10	0.11~11.29	≥11.30	0.05	6.28

Alkylphenol

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Bisphenol A (BPA)	≤3.20	3.21~10.80	≥10.81	12.80	28.40
Triclosan	≤45.00	45.01~417.98	≥417.99	5.66	2.14
4-Nonylphenol	≤0.50	0.51~4.82	≥4.83	0.09	6.69

Comments

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. BPA is a xenoestrogen, exhibiting estrogen-mimicking, hormone-like properties that raise concern about its suitability in some consumer products and food containers. FDA has ended its authorization of the use of BPA in baby bottles and infant formula packaging, based on market abandonment, not safety. Research has linked exposure to fertility problems, male impotence, heart disease and other conditions.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
PATIENT	TEST2	MALE	2002-09-23	2111290002	11-28-2021 11:10

Volatile Organic Compounds (VOCs)

Test Name (mcg/g)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
2-Methylhippuric Acid (2MHA)	≤74.00	74.01~792.29	≥792.30	31.35	4.94
3-Methylhippuric Acid (3MHA)	≤74.00	74.01~792.29	≥792.30	48.88	6.58
4-Methylhippuric Acid (4MHA)	≤74.00	74.01~792.29	≥792.30	7.56	6.68
2-Hydroxyisobutyric Acid (2HIB)	≤1005.00	1005.01~5789.99	≥5790.00	320.67	3.32
Phenylglyoxylic Acid (PGO)	≤105.60	105.61~387.89	≥387.90	488.00	4.50
N-acetyl phenyl cysteine (NAP)	≤0.45	0.46~2.89	≥2.90	0.36	0.77

Comments

PGO is a metabolite of styrene (ethylbenzene, vinylbenzene, phenylethene), which is an important chemical in production of rubber, plastic, insulation, fiberglass, pipes, food containers, and carpet backing. Styrene is a known carcinogen, especially in 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.

Urine Creatinine

Test Name (mg/ml)	In Control	Moderate	High	Current Level	Previous Level 10/29/2021
Creatinine	0.25~2.16		≤0.24 ≥2.17	0.05	1.77

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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