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16 HARKER STREET
BURWOOD VIC 3125

Dr.SAMPLE REPORT
TEST HEALTH CENTRE
123 TEST STREET
BURWOOD VIC 3125

LAB ID : 3814149
UR NO. :
Collection Date : 09-May-2022
Received Date:09-May-2022



3814149

EXTERNALLY REFERRED

URINE, SPOT

Result Range Units

Mycotoxins Ext. Panel, Initial Test

MYCOTOXIN	RESULT	VALUE	REFERENCE RANGE
Ochratoxin A	Negative	1.28900 ppb	(R.R: 0 - 1.80 ppb)
Aflatoxin Group	POSITIVE	1.37000 ppb	(R.R: 0 - 0.80 ppb)
Trichothecene Group	EQUIVOCAL	0.02700 ppb	(R.R: 0 - 0.04 ppb)
Gliotoxin Derivative	POSITIVE	1.69300 ppb	(R.R: Less than 0.5 ppb)
Zearalenone	Negative	0.20000 ppb	(R.R: Less than 0.5 ppb)

Reference Range Interpretation:

Mycotoxin	Negative Range	Equivocal Range	POSITIVE Range
Ochratoxin A	<1.80 ppb	1.80 - 2.00 ppb	>2.0 ppb
Aflatoxin Group	<0.80 ppb	0.80 - 1.00 ppb	>1.0 ppb
Trichothecene Group	<0.04 ppb	0.04 - 0.08 ppb	>0.08 ppb
Gliotoxin Derivative	<0.50 ppb	0.50 - 1.00 ppb	>1.00 ppb
Zearalenone	<0.50 ppb	0.50 - 0.70 ppb	>0.70 ppb

Testing performed at Real Time Labs, Carrollton, TX, USA.

COMMENTS:

Mycotoxins are low molecular weight secondary metabolites produced by moulds that;

- Are not essential in maintaining the lifecycle of the mold
- But give the mold a competitive advantage over other organisms (bacteria and molds)

Mycotoxins are more commonly known to be present through ingestion of food but airborne contamination (inhaling mouldy air in damp indoor areas) is being recognized as a cause as well.

Mycotoxins

- bind to DNA and RNA and alter regular protein synthesis and function,
- cause oxidative stress through antioxidant depletion,
- alter cell membrane function and transport.

The following are the key mycotoxins and the organisms that produce them;

MYCOTOXIN

ORGANISM/S and EFFECTS

Aflatoxin

Causative Organism/s
- Aspergillus flavus, Aspergillus parasiticus
Effects
- Inhibit Protein synthesis, cause immune suppression,
- Primary target liver but also found in lung and brain

Ochratoxin A

Causative Organism/s
- Aspergillus ochraceus, Aspergillus niger, Aspergillus carbonarius
Penicillium verrucosum, Penicillium nordicum, Penicillium chrysogenum
Effects
- Inhibits phenylalanine tRNA synthetase and mitochondrial ATP production, stimulates lipid peroxidation, suppresses antibody production and globulin synthesis
- Found in grains, coffee beans and some wines
- Primary target is kidney (Nephrotoxic)
- Associated with UTIs and bladder cancer



SAMPLE REPORT

09-May-1990 Female

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cont/

MYCOTOXIN

ORGANISM/S and EFFECTS

Macrocyclic

Trichothecenes

Causative Organism/s

- *Stachybotrys chartarum* (black mould in buildings), *Trichoderma*
(Produce toxins Roridin, Satratoxin, Verrucarin)

Effects

- Inhibits protein synthesis, peptidyl synthesis, causes lymphoid necrosis and dysregulation of IgA production
- Immunosuppression, nausea, vomiting, weight loss

Gliotoxin

Causative Organism/s

- *Aspergillus versicolor*, *Aspergillus fumigatus*

Effects

- Inhibits macrophage phagocytosis, induces macrophage apoptosis, blocks T and B cell Activation
- Immunosuppression, in-vivo displays anti-inflammatory activity

Zearalenone

Effects

- Has strong affinity to Estrogen Receptor, increasing activation of this receptor and leading to numerous endocrinology disorders. (Low sperm count, abnormal levels of Progesterone, disruption of ovulation)
- Reduces integrity of gut lining leading to intestinal hyperpermeability.
- Reduces gut microbiota diversity.
- Down regulates expression of tumour suppression genes leading to higher risk of GIT cancer.

Tests ordered: IMPEI, MycotoxEI