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

# SAMPLE REPORT 09-May-1990 Female

16 HARKER STREET BURWOOD VIC 3125

LAB ID: 3814147

UR NO.:

Collection Date: 09-May-2022 Received Date:09-May-2022



3814147

## EXTERNALLY REFERRED

URINE, SPOT Result Range Units

### Mycotoxins Basic Panel, Initial Test

MYCOTOXIN	RESULT	VALUE	REFERENCE RANGE	
Ochratoxin A	POSITIVE	2.594 <b>00</b> ppb	(R.R: 0 - 1.80 p	opb)
Aflatoxin Group	Negative	0.56800 ppb	(R.R: 0 - 0.80 p	opb)
Trichothecene Group	POSITIVE	<b>0.26600</b> ppb	(R.R: 0 - 0.04 p	opb)
Zearalenone	POSITIVE	<b>1.69200</b> 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;

- 1. 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

- 1. bind to DNA and RNA and alter regular protein synthesis and function,
- 2. cause oxidative stress through antioxidant depletion,
- 3. 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 verrucsum, 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

cont/

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### 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.

## **SPECIMEN RECEPTION**

URINE, SPOT

Result

Range

Units

SPECIMEN RECEP. COMMENTS

Basic

Tests ordered: SRCOM,IMPEI,MycotoxBI

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