

# CERTIFICATE OF ANALYSIS

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## PRODUCT INFORMATION

Product Name:	Humic/Fulvic Concentrate
Product Code:	C072C
Product Lot Number:	22E25-1105-C072C
Manufacture Date:	May 25, 2022

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Origin of Humic Substances:	Alberta, Canada
Product Matrix	Liquid

Composition (Ingredients):	RO Water; Organic Humic and Fulvic Acids (Aqueous Extracts of Humalite)
Storage Conditions:	Ambient—room temperature (10 – 25 C), do not freeze; sanitize dispensing valve; open in dry location and avoid prolonged exposure to direct sunlight; refrigerate and reseal after opening.
Directions for Use:	Sanitize dispensing valve; slowly combine one dose (6 mL, 6.08 g) with 494 mL non-chlorinated water while mixing—produces one (1) 500 mL beverage. Minimum estimated shelf life of 6 months from the date of manufacture; re-testing of Aerobic Plate Count recommended after 6 months from date of manufacture.

## QUALITY & PURITY

### Physical Attributes

Parameter	Test Method	Tolerance	Result
Appearance	Organoleptic	Very dark brown to black in color, opaque unless diluted	Within Tolerance
pH	AOAC 981.12	10.5-11.5	10.9

### Microbiological Contaminants

Parameter	Test Method	Tolerance <sup>1</sup>	Unit	Result
Aerobic Plate Count	Current USP/NF, 61	≤ 10,000	CFU/g	85 est. CFU/g
Mold & Yeast (combined)	Current USP/NF, 2021	≤ 1000	CFU/g	<20 CFU/g
E. coli	Current USP/NF, 2022	Not Detected	Per 10g	Not Detected
Salmonella	Current USP/NF, 2022	Not Detected	Per 10g	Not Detected
Staphylococcus aureus	Current USP/NF, 2022	Not Detected	Per 10g	Not Detected
Pseudomonas aeruginosa	Current USP/NF, 62	Not Detected	Per 10g	Not Detected

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## Heavy Metal Impurities

<i>Parameter</i>	<i>Test Method (ICP-MS)</i>	<i>Tolerance (mg/kg)</i>	<i>Result (mg/l)</i>
Arsenic	AOAC 2015.01 Mod <2232>	5.0	0.0
Cadmium	AOAC 2015.01 Mod <2232>	0.3	0.0
Lead	AOAC 2015.01 Mod <2232>	10.0	0.0
Mercury	AOAC 2015.01 Mod <2232>	0.2	0.0

## Mineral Content

<i>Parameter</i>	<i>Test Method</i>	<i>Tolerance</i>	<i>Result (ppm (w/w))</i>
Aluminum	AOAC 2015.01 Mod <2232>	Report Results	217
Antimony	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Barium	AOAC 2015.01 Mod <2232>	Report Results	<0.02
Beryllium	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Bismuth	AOAC 2015.01 Mod <2232>	Report Results	<0.02
Boron	AOAC 2015.01 Mod <2232>	Report Results	<0.2
Calcium	AOAC 2015.01 Mod <2232>	Report Results	1050
Chromium	AOAC 2015.01 Mod <2232>	Report Results	<0.001
Cobalt	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Copper	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Iron	AOAC 2015.01 Mod <2232>	Report Results	220
Lithium	AOAC 2015.01 Mod <2232>	Report Results	<0.1
Magnesium	AOAC 2015.01 Mod <2232>	Report Results	107
Manganese	AOAC 2015.01 Mod <2232>	Report Results	<0.02
Molybdenum	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Nickel	AOAC 2015.01 Mod <2232>	Report Results	<0.02
Phosphorus	AOAC 2015.01 Mod <2232>	Report Results	4
Potassium	AOAC 2015.01 Mod <2232>	Report Results	17100
Selenium	AOAC 2015.01 Mod <2232>	Report Results	<0.1
Silver	AOAC 2015.01 Mod <2232>	Report Results	<0.02

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## Mineral Content

<i>Parameter</i>	<i>Test Method</i>	<i>Tolerance</i>	<i>Result (ppm (w/w))</i>
Sodium	AOAC 2015.01 Mod <2232>	Report Results	960
Strontium	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Thallium	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Tin	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Titanium	AOAC 2015.01 Mod <2232>	Report Results	<0.02
Uranium	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Vanadium	AOAC 2015.01 Mod <2232>	Report Results	<0.01
Zinc	AOAC 2015.01 Mod <2232>	Report Results	119
Zirconium	AOAC 2015.01 Mod <2232>	Report Results	<0.1

## ADDITIONAL INFORMATION

### Footnotes

<sup>1</sup>Tolerances for Microbiological and Heavy Metal Impurities based the NSF International Standards for Dietary Supplements acceptable limits for microbiological and heavy metal contaminants in raw materials.

<sup>2</sup>Detection Limit

### Glossary

CFU = Colony Forming Unit  
EPA = (United States) Environmental Protection Agency  
MFHPB = (Canada) Microbiological Food Health Protection Branch  
MPN = Most Probable Number  
USP/NF = United States Pharmacopeia / The National Formulary  
AOAC = Association of Official Agricultural Chemists

## PRODUCT RELEASE

### Conformance to Tolerances

Parameters (Specifications)	PASS
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## Approval

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*Approved By*

*Signature*

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June 9, 2022

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