



**Certificate of Analysis**

**Product:** ConcenTrace® Liquid Minerals  
**Country of Origin:** United States of America  
**GMO Status:** NON-GMO

**Lot Number:** 52013

**Manufacture Date:** 05/2013  
**Date Testing Finalized:** 08/14/2013  
**Best Sold By:** 05/2018

**Mineral Analysis\***  
**\*See Page Two for Full Analysis Results and Specifications**

**Contaminant Analysis**

<u>Contaminant Group</u>	<u>Method</u>	<u>Specification</u>	<u>Lot Results</u>
Pesticides	EPA Method SW 8081	Less than U.S. EPA MCL	Conform
Polychlorinated Biphenyl	EPA Method 8082A/3510C	Less than U.S. EPA MCL	Conform
Herbicides	EPA Method 8151A/3510C	Less than U.S. EPA MCL	Conform
Volatiles	EPA Method 8260C/5030C	Less than U.S. EPA MCL	Conform
Semi-Volatiles	EPA Method 8270D/3510C	Less than U.S. EPA MCL	Conform

**Physical Data**

<u>Physical Description</u>	<u>Method</u>	<u>Specification</u>	<u>Lot Results</u>
Color	Visual	Light Yellow	Light Yellow
pH	EPA 150.1	5.2 - 6.2	5.91
Specific Gravity	Gravimetric	1.24 - 1.37	1.30
Refractive Index	AOAC	47 - 52 Degree Brix	48.2 Degree Brix

**Microbiological Profile**

<u>Microbe</u>	<u>Method</u>	<u>Specification</u>	<u>Lot Results</u>
Standard Plate Count	AOAC966.23	Less than 1,000 CFU/g	10 CFU/g
Total Coliform	AOAC991.14	Less than 100 CFU/g	<10 CFU/g
E. Coli	AOAC991.14	Less than 100 CFU/g	<10 CFU/g
Enterobacteriaceae	AOAC 2003.01	<10 CFU/g	<10 CFU/g
Staphylococcus Aureus	AOAC 2003.07	<10 CFU/g	<10 CFU/g
Yeast & Mold	FDA BAM	<10 / <10 CFU/g	<10 / <10 CFU/g

The date and information herein are believed to be correct based on our testing methods; however, we do not guarantee the duplication of these results by a third party. The prospective user determines the suitability of the product for their intended use. As testing improves, the specifications, averages, and the best sold by date may change without notice. Some of the best sold by date of the product may be different from the date above according to the laws and regulations of each county.

Signature below confirms review of testing by third party laboratory to be found acceptable and meets high expectations for contract laboratories used by Trace Minerals Research.

QC Signature: *Kelly Jones* Kelly Jones Date Signed: 08/28/14

**Full Analysis Summary-Master Batch**

Product:		ConcenTrace Liquid		Lot Number: 52013					
Mineral	Specification	Result	U/M	Method	Mineral	Specification	Result	U/M	Method
Aluminum	<10 mcg/ml	7.74	mcg/ml	ICP-MS USP <730>	Iodine	<25 mcg/ml	14	mcg/ml	ICP-MS USP <730>
Antimony	<3.5 mcg/ml	0.429	mcg/ml	ICP-MS USP <730>	Iridium	<0.5 mcg/ml	0.003	mcg/ml	ICP-MS USP <730>
Arsenic(Inorganic)	<10 ppm	0.55	ppm	EPA Method 1632A	Iron	<31 mcg/ml	0.582	mcg/ml	ICP-OES USP <730>
Barium	<0.5 mcg/ml	0.134	mcg/ml	ICP-MS USP <730>	Lanthanum	<3.5 mcg/ml	0.004	mcg/ml	ICP-MS USP <730>
Beryllium	<0.5 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>	Lead	<0.5 ppm	0.017	ppm	ICP-MS USP <730>
Bismuth	<3.5 mcg/ml	0.01	mcg/ml	ICP-MS USP <730>	Lithium	0.8-0.775 mg/ml	0.638	mg/ml	ICP-MS USP <730>
Boron	420-650 mg/ml	0.640	mg/ml	ICP-MS USP <730>	Lutetium	<0.4 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>
Bromide	<10 mg/ml	0.122	mcg/ml	AOAC 920.204	Magnesium	101.5-110 mg/ml	104.8	mg/ml	ICP-OES USP <730>
Cadmium	<0.5 ppm	0.002	ppm	ICP-MS USP <730>	Manganese	<5 mcg/ml	0.295	mcg/ml	ICP-MS USP <730>
Calcium	<165 mcg/ml	57.47	mcg/ml	ICP-OES USP <730>	Mercury	<0.1 ppm	0.008	ppm	ICP-MS USP <730>
Carbon	Not Established	<0.2 %	%	LECO	Molybdenum	<1 mcg/ml	0.458	mcg/ml	ICP-MS USP <730>
Cerium	<1 mcg/ml	0.005	mcg/ml	ICP-MS USP <730>	Neodymium	<0.5 mcg/ml	0.002	mcg/ml	ICP-MS USP <730>
Cesium	<1 mcg/ml	0.122	mcg/ml	ICP-MS USP <730>	Nickel	<2 mcg/ml	0.04	mcg/ml	ICP-MS USP <730>
Chloride	264-350 mg/ml	310.2	mg/ml	USP <221> Titration	Niobium	<2 mcg/ml	0.298	mcg/ml	ICP-MS USP <730>
Chromium	<1 mcg/ml	0.447	mcg/ml	ICP-MS USP <730>	Osmium	<0.1 mcg/ml	0.011	mcg/ml	ICP-MS USP <730>
Cobalt	<1 mcg/ml	0.018	mcg/ml	ICP-MS USP <730>	Palladium	<0.1 mcg/ml	0.004	mcg/ml	ICP-MS USP <730>
Copper	<1 mcg/ml	0.949	mcg/ml	ICP-MS USP <730>	Phosphorus	<10 mcg/ml	7.578	mcg/ml	ICP-OES USP <730>
Dysprosium	<0.5 mcg/ml	0.001	mcg/ml	ICP-MS USP <730>	Platinum	<0.1 mcg/ml	0.007	mcg/ml	ICP-MS USP <730>
Erbium	<0.5 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>	Potassium	1.25-2.5 mg/ml	1.30	mg/ml	ICP-OES USP <730>
Europium	<0.5 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>	Praseodymium	<0.5 mcg/ml	0.001	mcg/ml	ICP-MS USP <730>
Fluoride	<100 mcg/ml	4	mcg/ml	AOAC 939.11	Rhenium	<0.1 mcg/ml	0.013	mcg/ml	ICP-MS USP <730>
Gadolinium	<0.5 mcg/ml	0.001	mcg/ml	ICP-MS USP <730>	Rhodium	<0.5 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>
Gallium	<0.5 mcg/ml	0.017	mcg/ml	ICP-MS USP <730>	Rubidium	<2 mcg/ml	1	mcg/ml	ICP-MS USP <730>
Germanium	<0.7 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>	Ruthenium	<0.3 mcg/ml	0.005	mcg/ml	ICP-MS USP <730>
Gold	<0.35 mcg/ml	0.04	mcg/ml	ICP-MS USP <730>	Samarium	<0.2 mcg/ml	0.001	mcg/ml	ICP-MS USP <730>
Hafnium	<0.4 mcg/ml	0.053	mcg/ml	ICP-MS USP <730>	Scandium	<0.2 mcg/ml	0.335	mcg/ml	ICP-MS USP <730>
Holmium	<0.4 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>	Selenium	<2 mcg/ml	0.475	mcg/ml	ICP-MS USP <730>
Indium	<0.4 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>	Silicon	< 5 mcg/ml	3.739	mcg/ml	ICP-MS USP <730>
					Silver	<40 mcg/ml	0.19	mcg/ml	ICP-MS USP <730>
					Sodium	54 mg/ml	3.90	mg/ml	ICP-OES USP <730>
					Strontium	<2 mcg/ml	0.814	mcg/ml	ICP-MS USP <730>
					Sulfate	16.5-35 mg/ml	19.61	mg/ml	USP <221> Titration
					Tantalum	<0.2 mcg/ml	0.016	mcg/ml	ICP-MS USP <730>
					Tellurium	<1 mcg/ml	0.165	mcg/ml	ICP-MS USP <730>
					Terbium	<0.1 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>
					Thallium	<0.5 mcg/ml	0.014	mcg/ml	ICP-MS USP <730>
					Thorium	< 1 mcg/ml	0.476	mcg/ml	ICP-MS USP <730>
					Thulium	<0.3 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>
					Tin	<1 mcg/ml	0.008	mcg/ml	ICP-MS USP <730>
					Titanium	<4 mcg/ml	2.536	mcg/ml	ICP-MS USP <730>
					Tungsten	<2 mcg/ml	0.345	mcg/ml	ICP-MS USP <730>
					Vanadium	<4 mcg/ml	1.895	mcg/ml	ICP-MS USP <730>
					Ytterbium	<0.5 mcg/ml	<0.001	mcg/ml	ICP-MS USP <730>
					Yttrium	<0.2 mcg/ml	0.004	mcg/ml	ICP-MS USP <730>
					Zinc	<3.5 mcg/ml	3.134	mcg/ml	ICP-MS USP <730>
					Zirconium	<3.5 mcg/ml	1.464	mcg/ml	ICP-MS USP <730>

All results listed are from third party laboratory testing and the laboratory has been qualified by TMR. The results and methods used to find these results are approved by TMR.

QC Signature *AKJ*  
Date 08/28/14

