

Certificate of Analysis

Oriveda BV

Sample Name:	#3 Chaga extract (inonotus obliquus)	Eurofins Sample:	12014387
Project ID	ORIVED_HAR-20220729-0001	Receipt Date	29-Jul-2022
PO Number	NA	Receipt Condition	Ambient temperature
Lot Number	2022-2023	Login Date	29-Jul-2022
		Date Started	04-Aug-2022
		Sampled	Sample results apply as received
		Number Composited	6

Analysis	Result
Beta Glucan	
Beta Glucan	34.7 %
Total Polyphenols	
Total Polyphenols (Gallic Acid Equivalents)	61.8 mg/g

Method References	Testing Location
Beta Glucan (MISCYBGL_S)	Food Integrity Innovation-Madison
Megazyme Kit K-YBGL	6304 Ronald Reagan Ave Madison, WI 53704 USA
Total Polyphenols (TOTP_S)	Food Integrity Innovation-Madison
Reference: Abelson, J. N, M. I. Simon, and H. Sies. "Oxidants and Antioxidants Part A." Methods of Enzymology. 299:152-178 (1999). (modified).	6304 Ronald Reagan Ave Madison, WI 53704 USA

Testing Location(s)	Released on Behalf of Eurofins by
Food Integrity Innovation-Madison	Edward Ladwig - President Eurofins Food Chemistry Testing Madison
Eurofins Food Chemistry Testing Madison, Inc. 6304 Ronald Reagan Ave Madison WI 53704 800-675-8375	

These results apply only to the items tested. This certificate of analysis shall not be reproduced, except in its entirety, without the written approval of Eurofins. Measurement uncertainty for individual analyses can be obtained upon request.

CHAGA EXTRACT

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2023	levels (ppb)	levels in mg/g	levels per serving (mcg / 900 mg)
HEAVY METALS *			
Lead (Pb)	544.386	0.000544386	0.4899
Arsenic (As)	179.785	0.000179785	0.1618
Cadmium (Cd)	138.628	0.000138628	0.1248
Mercury (Hg)	0	0.000000000	0.0000
COMPOUNDS			
Manganese (Mn)	115012.845	0.115012845	103.5116
Zinc (Zn)	24119.073	0.024119073	21.7072
Magnesium (Mg)	574405.038	0.574405038	516.9645
Aluminum (Al)	17676.133	0.017676133	15.9085
Potassium (K)	66995549.208	66.995549208	60295.9943
Iron (Fe)	307622.767	0.307622767	276.8605
Copper (Cu)	3804.009	0.003804009	3.4236
Silver (Ag)	9.352	0.000009352	0.0084
Molybdenium (Mo)	93.326	0.000093326	0.0840
Selenium (Se)	48.048	0.000048048	0.0432
Nickel (Ni)	3424.808	0.003424808	3.0823
Cromium (Cr)	45671.993	0.045671993	41.1048
Vanadium (V)	114.732	0.000114732	0.1033
Caesium (Cs-133)	280.597	0.000280597	0.2525
Strontium (Sr-88)	2844.412	0.002844412	2.5600
Uranium (U)	14.907	0.000014907	0.0134

ESSENTIAL NUTRIENTS with a recommended daily value (FDA)	nutrient levels per serving (mcg / 900 mg)	FDA, recommended daily value (RDV in mcg), 4 years and older	percentage of RDV in this extract, per nutrient
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Manganese (Mn)	103.5116	2000	5.18%
Zinc (Zn)	21.7072	15000	0.14%
Magnesium (Mg)	516.9645	400000	0.13%
Potassium (K)	60295.9943	3500000	1.72%
Iron (Fe)	276.8605	18000	1.54%
Copper (Cu)	3.4236	2000	0.17%
Molybdenium (Mo)	0.0840	75	0.11%
Selenium (Se)	0.0432	70	0.06%
Cromium (Cr)	41.1048	120	34.25%

ppb : parts per billion
mg : milligram; 1/1,000th of a gram
mcg : microgram; 1/1,000,000 of a gram
mcg/g : micrograms per gram
mg/g : milligrams per gram
serving: the recommended average daily dosage

* There is a great variation in what are considered safe levels of heavy metals in food, worldwide. Ideally they should take into account both the intake and the body weight of a person. More information: <https://is.gd/TLg3ha>

Below are the official EU and World Health Organisation / Joint Expert Committee on Food Additives (WHO / JECFA) guidelines.

Arsenic: (Adult, 70 kgs: 150 mcg = daily limit)
Cadmium: (Adult, 70 kgs: 70 mcg daily = daily limit)
Lead: (Adult, 70 kgs: 250 mcg daily = daily limit)
Mercury: (Adult, 70 kgs: 16 mcg daily = daily limit)



Metals Analysis Report



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FullQuant Table

Element	Mass	Conc.	Units	RSD(%)	Det.
Mg	24	574405.038	ppb	3.2	Analog
Al	27	17676.133	ppb	3.9	Pulse
K	39	66995549.208	ppb	4.8	Analog
V	51	114.732	ppb	2.3	Pulse
Cr	52	45671.993	ppb	3.5	Analog
Mn	55	115012.845	ppb	2.8	Analog
Fe	56	307622.767	ppb	3.3	Analog
Ni	60	3424.808	ppb	2.7	Pulse
Cu	63	3804.009	ppb	2.2	Pulse
Zn	66	24119.073	ppb	1.4	Pulse
As	75	179.785	ppb	0.3	Pulse
Se	78	48.048	ppb	111.9	Pulse
Sr	88	2844.412	ppb	1.0	Pulse
Mo	95	93.326	ppb	6.7	Pulse
Ag	107	9.352	ppb	11.1	Pulse
Cd	111	66.341	ppb	9.2	Pulse
Cd	114	72.287	ppb	4.6	Pulse
Cs	133	280.597	ppb	2.7	Pulse
Hg	200	<0.000	ppb	N/A	Pulse
Hg	201	<0.000	ppb	N/A	Pulse
Hg	202	<0.000	ppb	N/A	Pulse
Pb	206	186.604	ppb	1.0	Pulse
Pb	207	176.915	ppb	1.9	Pulse
Pb	208	180.867	ppb	2.2	Pulse
U	238	14.907	ppb	3.9	Pulse

ISTD Table:

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
He	Sc	45	718034.43	1.2	129.4	Pulse	0.6000	3
He	Ge	72	67872.10	2.8	111.2	Pulse	0.6000	3
He	In	115	549985.47	1.6	108.0	Pulse	0.6000	3
He	Te	125	72083.32	1.8	111.9	Pulse	0.6000	3
He	Tb	159	1467831.23	0.9	104.7	Analog	0.6000	3
He	Bi	209	716309.42	0.9	88.9	Pulse	0.6000	3