



# cell nutrition

## Chemical Analysis (COA) of Hydrosalt84 Mineral Concentrate:

Element	Order	Num.	Results	Analysis Type
Hydrogen	H	1	0.30g/kg	DIN
Lithium	Li	3	0.40g/kg	AAS
Beryllium	Be	4	<0.01ppm	AAS
Boron	B	5	<0.001ppm	FSK
Carbon	C	6	<0.001ppm	FSK
Nitrogen	N	7	0.024ppm	ICG
Oxygen	O	8	1.20g/kg	DIN
Fluoride	F-	9	<0.1g/kg	Potentiometer
Sodium	Na+	11	382.61g/kg	FSM
Magnesium	Mg	12	0.16g/kg	AAS
Aluminium	Al	13	0.661ppm	AAS
Silicon	Si	14	<0.1g/kg	AAS
Phosphorus	P	15	<0.10ppm	ICG
Sulphur	S	16	12.4g/kg	TXRF
Chloride	Cl-	17	590.93g/kg	gravimetric
Potassium	K+	19	3.5g/kg	FSM
Calcium	Ca	20	4.05g/kg	Titration
Scandium	Sc	21	<0.0001ppm	FSK
Titanium	Ti	22	<0.001ppm	FSK
Vanadium	V	23	0.06ppm	AAS
Chromium	Cr	24	0.05ppm	AAS
Manganese	Mn	25	0.27ppm	AAS
Iron	Fe	26	38.9ppm	AAS
Cobalt	Co	27	0.60ppm	AAS
Nickel	Ni	28	0.13ppm	AAS
Copper	Cu	29	0.56ppm	AAS
Zinc	Zn	30	2.38ppm	AAS
Gallium	Ga	31	<0.001ppm	FSK
Germanium	Ge	32	<0.001ppm	FSK
Arsenic	As	33	<0.01ppm	AAS
Selenium	Se	34	0.05ppm	AAS
Bromine	Br	35	2.1ppm	TXRF
Rubidium	Rb	37	0.04ppm	AAS
Strontium	Sr	38	0.014g/kg	AAS
Ytterbium	Y	39	<0.001ppm	FSK
Zirconium	Zr	40	<0.001ppm	FSK
Niobium	Nb	41	<0.001ppm	FSK
Molybdenum	Mo	42	0.01ppm	AAS
Technetium	Tc	43	unstable	artificial isotope - not included
Ruthenium	Ru	44	<0.001ppm	FSK
Rhodium	Rh	45	<0.001ppm	FSK
Palladium	Pd	46	<0.001ppm	FSK
Silver	Ag	47	0.031ppm	AAS



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Cadmium	Cd	48	<0.01ppm	AAS
Indium	In	49	<0.001ppm	FSK
Tin	Sn	50	<0.01ppm	AAS
Antimony	Sb	51	<0.01ppm	AAS
Tellurium	Te	52	<0.001ppm	FSK
Iodine	I	53	<0.1g/kg	potentiometrie
Caesium	Cs	55	<0.001ppm	FSK
Barium	Ba	56	1.96ppm	AAS/TXR
Lanthanum	La	57	<0.001ppm	FSK
Cerium	Ce	58	<0.001ppm	FSK
Praseodymium	Pr	59	<0.001ppm	FSK
Neodymium	Nd	60	<0.001ppm	FSK
Promethium	Pm	61	unstable	artificial isotope - not included
Samarium	Sm	62	<0.001ppm	FSK
Europium	Eu	63	<3.0ppm	TXRF
Gadolinium	Gd	64	<0.001ppm	FSK
Terbium	Tb	65	<0.001ppm	FSK
Dysprosium	Dy	66	<4.0ppm	TXRF
Holmium	Ho	67	<0.001ppm	FSK
Erbium	Er	68	<0.001ppm	FSK
Thulium	Tm	69	<0.001ppm	FSK
Ytterbium	Yb	70	<0.001ppm	FSK
Lutetium	Lu	71	<0.001ppm	FSK
Hafnium	Hf	72	<0.001ppm	FSK
Tantalum	Ta	73	1.1ppm	TXRF
Wolfram	W	74	<0.001ppm	FSK
Rhenium	Re	75	<2.5ppm	TXRF
Osmium	Os	76	<0.001ppm	FSK
Iridium	Ir	77	<2.0ppm	TXRF
Platinum	Pt	78	0.47ppm	TXRF
Gold	Au	79	<1.0ppm	TXRF
Mercury	Hg	80	<0.03ppm	AAS
Thallium	Tl	81	0.06ppm	AAS
Lead	Pb	82	0.10ppm	AAS
Bismuth	Bi	83	<0.10ppm	AAS
Polonium	Po	84	<0.001ppm	FSK
Astatine	At	85	<0.001ppm	FSK
Francium	Fr	87	<1.0ppm	TXRF
Radium	Ra	88	<0.001ppm	FSK
Actinium	Ac	89	<0.001ppm	FSK
Thorium	Th	90	<0.001ppm	FSK
Protactinium	Pa	91	<0.001ppm	FSK
Uranium	U	92	<0.001ppm	FSK
Neptunium	Np	93	<0.001ppm	FSK
Plutonium	Pu	94	<0.001ppm	FSK

## Additional Combined Elements:

Water	H <sub>2</sub> O	1.5g/kg	DIN
Ammonium	NH <sub>4</sub> <sup>+</sup>	0.010ppm	Photometry
Nitrate	NO <sub>3</sub> <sup>-</sup>	0.09ppm	Photometry
Phosphate	PO <sub>4</sub> <sup>3-</sup>	<0.10ppm	ICG
Hydrogen carbonate	HCO <sub>3</sub> <sup>-</sup>	<1.0g/kg	Titration



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The inert gasses Helium-He-2, Neon-Ne-10, Argon-Ar-18, Krypton-Kr-36, Xenon-Xe-54, and Radon-Rn-86 could not be included in the research. Many of the elements could not be proven with conventional chemical analysis. Through the transfer of frequency patterns by means of wave transference, it was possible to prove the frequency pattern with the aid of frequency spectroscopy. With this, the detection of elements even smaller than <math><0.001\text{ ppm}</math> was proven.

g/kg	Grams per kilogram
DIN	German Standards Institute
ICG	Ion chromatography
AAS	Atom absorption spectrometry
TXRF	Total reflection -X-Ray -Florescence - Spectrometry
ppm	Parts per million
FSM	Flame spectrometry
FSK	Frequency Spectroscopy