

**BEST-TEST ANALYTICAL SERVICES, LLC**

NAME: EMPIRE MINING CO., LLC	SAMPLE DATE: 7/29/2021	DATE REC'D: 8/3/2021
ADDRESS: P.O. BOX 157	PROJECT #:	INVOICE#S
CITY: GERLACH	CONTACT: Ericka Schell	PRICE: \$150.00
STATE/ZIP NV 89412	PROJECT: DIHYDRATE - GYPSUM EMC 90	

Lab ID		DIHYDRATE GYP 90	DIHYDRATE GYP 90
		2966	2966
		TOTAL	WATER SOLUBLE
	Detection Limit		
DRY MATTER (DM)	0.01%	80.73%	80.73%
-FREE MOISTURE			
TOTAL CARBON (TC)	0.01%	0.445%	
TOTAL NITROGEN (Comb.)	0.01%	0.007%	
CaCO3 Equiv. by Acid Titration	0.25%	4.27%	
CaCO3 Equiv. by Carbon Balance	0.25%	3.71%	
GYPSUM (CaSO4-2H2O) by SO4		94.60%	95.35%
GYPSUM (CaSO4-2H2O) by Ca(CB)		94.57%	95.07%
PHOSPHORUS-P	0.002%	0.003%	<0.001
As P2O5		0.007%	<0.001
POTASSIUM (K)	0.002%	0.003%	0.012%
As K2O		0.004%	0.014%
SULFUR (S)	0.002%	17.62%	17.76%
CALCIUM (Ca)	0.002%	23.62%	22.14%
MAGNESIUM (Mg)	0.002%	0.016%	0.002%
STRONTIUM (Sr)	0.002%	0.016%	0.082%
SODIUM (Na)	0.002%	0.025%	0.019%
		mg/L ~ppm	mg/L ~ppm
IRON (Fe)	1	172	0.25
ALUMINUM (Al)	1	270	0.62
MANGANESE (Mn)	0.1	18.5	0.02
BARIUM (Ba)	0.1	4.6	
ARSENIC (As)	0.1	<0.1	0.05
BORON (B)	0.1	12.8	0.16
CHLORIDE (Cl)	2	<2	<2
BERYLLIUM (Be)	0.1	<0.01	
CADMIUM (Cd)	0.1	0.12	<0.01
CHROMIUM (Cr)	0.1	<0.1	<0.01
COBALT (Co)	0.1	0.4	<0.01
COPPER (Cu)	0.1	1.2	0.02
LEAD (Pb)	0.1	<0.1	<0.01
MOLYBDENUM (Mo)	0.1	0.1	<0.01
NICKEL (Ni)	0.1	<0.1	0.00
SELENIUM (Se)	0.1	<0.1	<0.01
ZINC (Zn)	0.1	0.8	<0.01

\* Stirred 1.00 grams of sample (As received or ground to <2mm) in 1 liter of water with high speed magnetic stir bar for 12 hours.

*Stephen T. Jones*  
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 CHEMIST