

Natural Soda, LLC

Project ID: NS002490

Sample ID: BG-6

ACZ Sample ID: **L65695-07**

Date Sampled: 05/04/21 12:30

Date Received: 05/07/21

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								05/10/21 13:42	kja
Nitrogen, total Kjeldahl	M351.2 - Block Digestor				*				05/24/21 15:31	md
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/19/21 12:31	spl

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	<0.05	U		mg/L	0.05	0.25	05/12/21 19:38	jlw
Arsenic, dissolved	M200.8 ICP-MS	1	0.00063	B		mg/L	0.0002	0.001	05/18/21 14:35	bsu
Barium, dissolved	M200.7 ICP	1	0.336			mg/L	0.007	0.035	05/12/21 19:38	jlw
Beryllium, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	05/12/21 19:38	jlw
Boron, dissolved	M200.7 ICP	1	0.723			mg/L	0.03	0.1	05/12/21 19:38	jlw
Cadmium, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.025	05/12/21 19:38	jlw
Calcium, dissolved	M200.7 ICP	1	2.41			mg/L	0.1	0.5	05/12/21 19:38	jlw
Chromium, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	05/12/21 19:38	jlw
Copper, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	05/13/21 11:41	jlw
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	05/12/21 19:38	jlw
Lead, dissolved	M200.7 ICP	1	<0.03	U		mg/L	0.03	0.15	05/12/21 19:38	jlw
Lithium, dissolved	M200.7 ICP	1	0.110			mg/L	0.008	0.04	05/12/21 19:38	jlw
Magnesium, dissolved	M200.7 ICP	1	1.55			mg/L	0.2	1	05/12/21 19:38	jlw
Manganese, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	05/12/21 19:38	jlw
Mercury, dissolved	M245.1 CVAA	1	<0.0002	U	*	mg/L	0.0002	0.001	05/12/21 16:32	mlh
Molybdenum, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.1	05/12/21 19:38	jlw
Nickel, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	05/12/21 19:38	jlw
Potassium, dissolved	M200.7 ICP	1	0.82	B		mg/L	0.2	1	05/12/21 19:38	jlw
Selenium, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.00025	05/18/21 14:35	bsu
Silica, dissolved	M200.7 ICP	1	15.6			mg/L	0.2	1	05/12/21 19:38	jlw
Sodium, dissolved	M200.7 ICP	1	346		*	mg/L	0.2	1	05/12/21 19:38	jlw
Strontium, dissolved	M200.7 ICP	1	0.697			mg/L	0.009	0.045	05/12/21 19:38	jlw
Vanadium, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.025	05/12/21 19:38	jlw
Zinc, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	05/12/21 19:38	jlw

Natural Soda, LLC

Project ID: NS002490

Sample ID: BG-6

ACZ Sample ID: **L65695-07**

Date Sampled: 05/04/21 12:30

Date Received: 05/07/21

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	651		*	mg/L	2	20	05/15/21 0:00	eep
Carbonate as CaCO3		1	103		*	mg/L	2	20	05/15/21 0:00	eep
Hydroxide as CaCO3		1	<2	U	*	mg/L	2	20	05/15/21 0:00	eep
Total Alkalinity		1	753		*	mg/L	2	20	05/15/21 0:00	eep
Bromide	M300.0 - Ion Chromatography	10	<0.5	U	*	mg/L	0.5	2.5	05/21/21 20:03	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.0			%			05/28/21 0:00	calc
Sum of Anions			17			meq/L			05/28/21 0:00	calc
Sum of Cations			16			meq/L			05/28/21 0:00	calc
Chemical Oxygen Demand	M410.4	1	<10	U	*	mg/L	10	20	05/18/21 16:01	jck
Chloride	M300.0 - Ion Chromatography	10	13.9	B	*	mg/L	4	20	05/21/21 20:03	krh
Conductivity @25C	SM2510B	1	1460		*	umhos/cm	1	10	05/14/21 21:19	eep
Fluoride	M300.0 - Ion Chromatography	10	25.3		*	mg/L	0.5	2.5	05/21/21 20:03	krh
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		12			mg/L	0.2	5	05/28/21 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							05/12/21 8:59	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		<0.2	UH		mg/L	0.2	1	05/28/21 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	10	<0.2	UH	*	mg/L	0.2	1	05/08/21 2:11	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	10	<0.1	UH	*	mg/L	0.1	0.5	05/08/21 2:11	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	0.844		*	mg/L	0.05	0.2	05/27/21 17:27	syw
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH3		<2	U		mg/L	2	5	05/28/21 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	10	<2	U	*	mg/L	2	5	05/26/21 1:03	pjb
pH (lab)	SM4500H+ B									
pH		1	8.5	H		units	0.1	0.1	05/14/21 0:00	eep
pH measured at		1	21.7			C	0.1	0.1	05/14/21 0:00	eep
Phosphate, total	Calculation based on total Phosphorus		0.09	B		mg/L	0.03	0.2	05/28/21 0:00	calc
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.030	B	*	mg/L	0.01	0.05	05/20/21 22:07	pjb
Residue, Filterable (TDS) @180C	SM2540C	10	1060		*	mg/L	200	400	05/07/21 17:25	jck
Sodium Adsorption Ratio in Water	USGS - I1738-78		43						05/28/21 0:00	calc
Sulfate	M300.0 - Ion Chromatography	10	<4	U	*	mg/L	4	20	05/21/21 20:03	krh
Sulfide as S	SM4500S2-D	1	<0.02	U	*	mg/L	0.02	0.1	05/10/21 19:36	jck
TDS (calculated)	Calculation		870			mg/L			05/28/21 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.22						05/28/21 0:00	calc

Natural Soda, LLC

Project ID: NS002490

Sample ID: BG-11

ACZ Sample ID: **L65695-01**

Date Sampled: 05/03/21 10:35

Date Received: 05/07/21

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								05/10/21 13:42	kja
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								05/24/21 13:17	md
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/19/21 11:26	spl

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	<0.05	U		mg/L	0.05	0.25	05/12/21 19:11	jlw
Arsenic, dissolved	M200.8 ICP-MS	1	0.00085	B		mg/L	0.0002	0.001	05/18/21 14:25	bsu
Barium, dissolved	M200.7 ICP	1	0.407			mg/L	0.007	0.035	05/12/21 19:11	jlw
Beryllium, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	05/12/21 19:11	jlw
Boron, dissolved	M200.7 ICP	1	0.766			mg/L	0.03	0.1	05/12/21 19:11	jlw
Cadmium, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.025	05/12/21 19:11	jlw
Calcium, dissolved	M200.7 ICP	1	2.75			mg/L	0.1	0.5	05/12/21 19:11	jlw
Chromium, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	05/12/21 19:11	jlw
Copper, dissolved	M200.7 ICP	1	0.011	B		mg/L	0.01	0.05	05/13/21 11:21	jlw
Iron, dissolved	M200.7 ICP	1	0.395			mg/L	0.06	0.15	05/12/21 19:11	jlw
Lead, dissolved	M200.7 ICP	1	<0.03	U		mg/L	0.03	0.15	05/12/21 19:11	jlw
Lithium, dissolved	M200.7 ICP	1	0.156			mg/L	0.008	0.04	05/12/21 19:11	jlw
Magnesium, dissolved	M200.7 ICP	1	1.87			mg/L	0.2	1	05/12/21 19:11	jlw
Manganese, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	05/12/21 19:11	jlw
Mercury, dissolved	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	05/12/21 16:22	mlh
Molybdenum, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.1	05/12/21 19:11	jlw
Nickel, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	05/12/21 19:11	jlw
Potassium, dissolved	M200.7 ICP	1	0.90	B		mg/L	0.2	1	05/12/21 19:11	jlw
Selenium, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.00025	05/18/21 14:25	bsu
Silica, dissolved	M200.7 ICP	1	14.8			mg/L	0.2	1	05/12/21 19:11	jlw
Sodium, dissolved	M200.7 ICP	1	401		*	mg/L	0.2	1	05/12/21 19:11	jlw
Strontium, dissolved	M200.7 ICP	1	0.738			mg/L	0.009	0.045	05/12/21 19:11	jlw
Vanadium, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.025	05/12/21 19:11	jlw
Zinc, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	05/12/21 19:11	jlw

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Sample ID: BG-11

ACZ Sample ID: **L65695-01**

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Date Received: 05/07/21

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	691		*	mg/L	2	20	05/15/21 0:00	eep
Carbonate as CaCO ₃		1	139		*	mg/L	2	20	05/15/21 0:00	eep
Hydroxide as CaCO ₃		1	<2	U	*	mg/L	2	20	05/15/21 0:00	eep
Total Alkalinity		1	830		*	mg/L	2	20	05/15/21 0:00	eep
Bromide	M300.0 - Ion Chromatography	10	<0.5	U	*	mg/L	0.5	2.5	05/21/21 17:22	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-2.7			%			05/28/21 0:00	calc
Sum of Anions			19			meq/L			05/28/21 0:00	calc
Sum of Cations			18			meq/L			05/28/21 0:00	calc
Chemical Oxygen Demand	M410.4	1	11	B	*	mg/L	10	20	05/18/21 14:14	jck
Chloride	M300.0 - Ion Chromatography	10	53.8		*	mg/L	4	20	05/21/21 17:22	krh
Conductivity @25C	SM2510B	1	1690		*	umhos/cm	1	10	05/14/21 19:55	eep
Fluoride	M300.0 - Ion Chromatography	10	24.7		*	mg/L	0.5	2.5	05/21/21 17:22	krh
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		15			mg/L	0.2	5	05/28/21 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							05/12/21 8:33	mlh
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		<0.02	UH		mg/L	0.02	0.1	05/28/21 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	<0.02	UH	*	mg/L	0.02	0.1	05/08/21 2:00	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	<0.01	UH	*	mg/L	0.01	0.05	05/08/21 2:00	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	0.958		*	mg/L	0.05	0.2	05/27/21 15:31	syw
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		<0.2	U		mg/L	0.2	0.5	05/28/21 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	1.11		*	mg/L	0.2	0.5	05/26/21 0:55	pjb
pH (lab)	SM4500H+ B									
pH		1	9.0	H		units	0.1	0.1	05/14/21 0:00	eep
pH measured at		1	21.3			C	0.1	0.1	05/14/21 0:00	eep
Phosphate, total	Calculation based on total Phosphorus		0.19	B		mg/L	0.03	0.2	05/28/21 0:00	calc
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.060		*	mg/L	0.01	0.05	05/20/21 21:58	pjb
Residue, Filterable (TDS) @180C	SM2540C	5	1060		*	mg/L	100	200	05/07/21 17:10	jck
Sodium Adsorption Ratio in Water	USGS - I1738-78		46						05/28/21 0:00	calc
Sulfate	M300.0 - Ion Chromatography	10	<4	U	*	mg/L	4	20	05/21/21 17:22	krh
Sulfide as S	SM4500S2-D	1	0.020	B	*	mg/L	0.02	0.1	05/10/21 18:31	jck
TDS (calculated)	Calculation		1010			mg/L			05/28/21 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.05						05/28/21 0:00	calc

Natural Soda, LLC

Project ID: NS002490

Sample ID: BG-4

ACZ Sample ID: **L65695-08**

Date Sampled: 05/04/21 14:09

Date Received: 05/07/21

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								05/10/21 13:42	kja
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								05/24/21 15:50	md
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion								05/19/21 12:52	spl

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	<0.05	U		mg/L	0.05	0.25	05/12/21 19:48	jlw
Arsenic, dissolved	M200.8 ICP-MS	1	0.00025	B		mg/L	0.0002	0.001	05/18/21 14:37	bsu
Barium, dissolved	M200.7 ICP	1	0.164			mg/L	0.007	0.035	05/12/21 19:48	jlw
Beryllium, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	05/12/21 19:48	jlw
Boron, dissolved	M200.7 ICP	1	0.781			mg/L	0.03	0.1	05/12/21 19:48	jlw
Cadmium, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.025	05/12/21 19:48	jlw
Calcium, dissolved	M200.7 ICP	1	3.04			mg/L	0.1	0.5	05/12/21 19:48	jlw
Chromium, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	05/12/21 19:48	jlw
Copper, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	05/13/21 11:58	jlw
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	05/12/21 19:48	jlw
Lead, dissolved	M200.7 ICP	1	<0.03	U		mg/L	0.03	0.15	05/12/21 19:48	jlw
Lithium, dissolved	M200.7 ICP	1	0.164			mg/L	0.008	0.04	05/12/21 19:48	jlw
Magnesium, dissolved	M200.7 ICP	1	2.27			mg/L	0.2	1	05/12/21 19:48	jlw
Manganese, dissolved	M200.7 ICP	1	0.016	B		mg/L	0.01	0.05	05/12/21 19:48	jlw
Mercury, dissolved	M245.1 CVAA	1	<0.0002	U	*	mg/L	0.0002	0.001	05/12/21 16:33	mlh
Molybdenum, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.1	05/12/21 19:48	jlw
Nickel, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	05/12/21 19:48	jlw
Potassium, dissolved	M200.7 ICP	1	1.20			mg/L	0.2	1	05/12/21 19:48	jlw
Selenium, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.00025	05/18/21 14:37	bsu
Silica, dissolved	M200.7 ICP	1	14.7			mg/L	0.2	1	05/12/21 19:48	jlw
Sodium, dissolved	M200.7 ICP	1	414		*	mg/L	0.2	1	05/12/21 19:48	jlw
Strontium, dissolved	M200.7 ICP	1	0.793			mg/L	0.009	0.045	05/12/21 19:48	jlw
Vanadium, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.025	05/12/21 19:48	jlw
Zinc, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	05/12/21 19:48	jlw

Natural Soda, LLC

Project ID: NS002490

Sample ID: BG-4

ACZ Sample ID: **L65695-08**

Date Sampled: 05/04/21 14:09

Date Received: 05/07/21

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	737		*	mg/L	2	20	05/15/21 0:00	eep
Carbonate as CaCO3		1	79.8		*	mg/L	2	20	05/15/21 0:00	eep
Hydroxide as CaCO3		1	<2	U	*	mg/L	2	20	05/15/21 0:00	eep
Total Alkalinity		1	817		*	mg/L	2	20	05/15/21 0:00	eep
Bromide	M300.0 - Ion Chromatography	10	<0.5	U	*	mg/L	0.5	2.5	05/21/21 20:21	krh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-2.6			%			05/28/21 0:00	calc
Sum of Anions			20.0			meq/L			05/28/21 0:00	calc
Sum of Cations			19			meq/L			05/28/21 0:00	calc
Chemical Oxygen Demand	M410.4	1	12	B	*	mg/L	10	20	05/18/21 16:54	jck
Chloride	M300.0 - Ion Chromatography	10	85.6		*	mg/L	4	20	05/21/21 20:21	krh
Conductivity @25C	SM2510B	1	1750		*	umhos/cm	1	10	05/14/21 21:27	eep
Fluoride	M300.0 - Ion Chromatography	10	23.6		*	mg/L	0.5	2.5	05/21/21 20:21	krh
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		17			mg/L	0.2	5	05/28/21 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							05/12/21 9:03	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		<0.02	UH		mg/L	0.02	0.1	05/28/21 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	<0.02	UH	*	mg/L	0.02	0.1	05/08/21 2:20	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	<0.01	UH	*	mg/L	0.01	0.05	05/08/21 2:20	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	1.07		*	mg/L	0.05	0.2	05/27/21 17:29	syw
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH3		<0.2	U		mg/L	0.2	0.5	05/28/21 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	1.14		*	mg/L	0.2	0.5	05/26/21 1:04	pjb
pH (lab)	SM4500H+ B									
pH		1	8.6	H		units	0.1	0.1	05/14/21 0:00	eep
pH measured at		1	21.6			C	0.1	0.1	05/14/21 0:00	eep
Phosphate, total	Calculation based on total Phosphorus		0.2			mg/L	0.03	0.2	05/28/21 0:00	calc
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	1	0.063		*	mg/L	0.01	0.05	05/20/21 22:09	pjb
Residue, Filterable (TDS) @180C	SM2540C	5	1170		*	mg/L	100	200	05/07/21 17:28	jck
Sodium Adsorption Ratio in Water	USGS - I1738-78		44						05/28/21 0:00	calc
Sulfate	M300.0 - Ion Chromatography	10	<4	U	*	mg/L	4	20	05/21/21 20:21	krh
Sulfide as S	SM4500S2-D	1.5	0.050	B	*	mg/L	0.03	0.15	05/10/21 19:44	jck
TDS (calculated)	Calculation		1050			mg/L			05/28/21 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.11						05/28/21 0:00	calc