

October 31, 2023

KP Kauffman Co. Inc.

Levi Kirk

1700 Lincoln St #4550

Denver CO 80203

Project Name - McElwain 32-17

Project Number - [none]

Attached are your analytical results for McElwain 32-17 received by Origins Laboratory, Inc. October 06, 2023. This project is associated with Origins project number Y310230-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

Levi Kirk
Project Number: [none]
Project: McElwain 32-17

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG#1@4'	Y310230-01	Soil	October 5, 2023 0:00	10/06/2023 11:06
BG#1@8'	Y310230-02	Soil	October 5, 2023 0:00	10/06/2023 11:06
BG#2@4'	Y310230-03	Soil	October 5, 2023 0:00	10/06/2023 11:06
BG#2@8'	Y310230-04	Soil	October 5, 2023 0:00	10/06/2023 11:06
BG#3@4'	Y310230-05	Soil	October 5, 2023 0:00	10/06/2023 11:06
BG#3@8'	Y310230-06	Soil	October 5, 2023 0:00	10/06/2023 11:06
BG#4@4'	Y310230-07	Soil	October 5, 2023 0:00	10/06/2023 11:06
BG#4@8'	Y310230-08	Soil	October 5, 2023 0:00	10/06/2023 11:06

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

Origins Laboratory F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 4310230 Client: KPK
 Checklist Completed by: JST/ETH Client Project ID: McElwain 32-17
 Date/time completed: 10/10/23 Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1, B.4 °C / _____ °C / _____ °C (Describe) _____ °C
 Thermometer ID: T004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		/		
Is there ice present (document if blue ice is used)		/		
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?		X		
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):	<u>NO sample times</u>			

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 10/10/23

Origins Laboratory, Inc.

Jefe Pellegrini

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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#1@4'
10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-01 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	1.00	0.0993	mg/L	1	B3J1211	KAP	10/12/2023	10/13/2023	
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Metals by Saturated Paste by EPA 6010

Calcium	13.4	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023	
Magnesium	12.0	0.823	"	"	"	KAP	"	"	
Sodium	22.9	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	8.01		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023	
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SAR by 20B Saturated Paste

SAR	6.42	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	4.33	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023	
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Table 915 metals by EPA 6020B

Arsenic	2.87	0.0847	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Barium	78.2	8.47	"	"	"	CIH	"	"	
Cadmium	0.0847	0.0847	"	"	"	CIH	"	"	
Copper	ND	8.47	"	"	"	CIH	"	"	U

Origins Laboratory, Inc.



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 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#1@4'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-01 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Lead	ND	8.47	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	U
Nickel	ND	8.47	"	"	"	CIH	"	"	U
Selenium	0.102	0.0847	"	"	"	CIH	"	"	
Silver	ND	0.0847	"	"	"	CIH	"	"	U
Zinc	ND	84.7	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196A

Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713664		10/05/2023	10/27/2023	
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Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#1@8'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-02 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	0.903	0.101	mg/L	1	B3J1211	KAP	10/12/2023	10/13/2023	
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Metals by Saturated Paste by EPA 6010

Calcium	5.19	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023	
Magnesium	5.59	0.823	"	"	"	KAP	"	"	
Sodium	16.0	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	8.18		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023	
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SAR by 20B Saturated Paste

SAR	6.89	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.65	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023	
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Table 915 metals by EPA 6020B

Arsenic	3.34	0.0958	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Barium	123	9.58	"	"	"	CIH	"	"	
Cadmium	0.119	0.0958	"	"	"	CIH	"	"	
Copper	ND	9.58	"	"	"	CIH	"	"	U

Origins Laboratory, Inc.



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Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#1@8'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-02 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Lead	ND	9.58	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	U
Nickel	ND	9.58	"	"	"	CIH	"	"	U
Selenium	ND	0.0958	"	"	"	CIH	"	"	U
Silver	ND	0.0958	"	"	"	CIH	"	"	U
Zinc	ND	95.8	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196A

Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713664		10/05/2023	10/27/2023	
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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#2@4'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-03 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	1.21	0.0995	mg/L	1	B3J1211	KAP	10/12/2023	10/13/2023	
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Metals by Saturated Paste by EPA 6010

Calcium	10.7	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023	
Magnesium	9.18	0.823	"	"	"	KAP	"	"	
Sodium	15.2	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	7.99		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023	
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SAR by 20B Saturated Paste

SAR	4.83	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	3.18	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023	
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Table 915 metals by EPA 6020B

Arsenic	5.10	0.0863	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Barium	191	8.63	"	"	"	CIH	"	"	
Cadmium	0.249	0.0863	"	"	"	CIH	"	"	
Copper	13.8	8.63	"	"	"	CIH	"	"	

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 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#2@4'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-03 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Lead	12.1	8.63	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Nickel	17.4	8.63	"	"	"	CIH	"	"	
Selenium	0.182	0.0863	"	"	"	CIH	"	"	
Silver	ND	0.0863	"	"	"	CIH	"	"	U
Zinc	ND	86.3	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196A

Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713664		10/05/2023	10/27/2023	
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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#2@8'
10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-04 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	0.905	0.101	mg/L	1	B3J1211	KAP	10/12/2023	10/13/2023	
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Metals by Saturated Paste by EPA 6010

Calcium	17.4	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023	
Magnesium	13.8	0.823	"	"	"	KAP	"	"	
Sodium	11.6	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	7.96		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023	
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SAR by 20B Saturated Paste

SAR	2.94	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	3.51	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023	
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Table 915 metals by EPA 6020B

Arsenic	3.51	0.0948	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Barium	141	9.48	"	"	"	CIH	"	"	
Cadmium	0.173	0.0948	"	"	"	CIH	"	"	
Copper	9.92	9.48	"	"	"	CIH	"	"	

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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#2@8'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-04 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Lead	9.78	9.48	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Nickel	9.69	9.48	"	"	"	CIH	"	"	
Selenium	0.112	0.0948	"	"	"	CIH	"	"	
Silver	ND	0.0948	"	"	"	CIH	"	"	U
Zinc	ND	94.8	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196A

Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713664		10/05/2023	10/27/2023	
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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#3@4'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-05 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	1.17	0.0986	mg/L	1	B3J1211	KAP	10/12/2023	10/13/2023
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Metals by Saturated Paste by EPA 6010

Calcium	18.0	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023
Magnesium	14.1	0.823	"	"	"	KAP	"	"
Sodium	24.5	0.435	"	"	"	KAP	"	"

pH in Soil by 9045D

pH	7.85		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023
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SAR by 20B Saturated Paste

SAR	6.12	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	5.01	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023
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Table 915 metals by EPA 6020B

Arsenic	4.99	0.0900	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023
Barium	176	9.00	"	"	"	CIH	"	"
Cadmium	0.155	0.0900	"	"	"	CIH	"	"
Copper	11.5	9.00	"	"	"	CIH	"	"

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 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#3@4'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-05 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Lead	10.3	9.00	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Nickel	11.6	9.00	"	"	"	CIH	"	"	
Selenium	0.174	0.0900	"	"	"	CIH	"	"	
Silver	ND	0.0900	"	"	"	CIH	"	"	U
Zinc	ND	90.0	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196 A

Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713665		10/05/2023	10/27/2023	
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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#3@8'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-06 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	1.25	0.101	mg/L	1	B3J1212	KAP	10/12/2023	10/13/2023
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Metals by Saturated Paste by EPA 6010

Calcium	4.16	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023
Magnesium	4.36	0.823	"	"	"	KAP	"	"
Sodium	9.97	0.435	"	"	"	KAP	"	"

pH in Soil by 9045D

pH	8.04		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023
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SAR by 20B Saturated Paste

SAR	4.83	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.13	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023
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Table 915 metals by EPA 6020B

Arsenic	4.61	0.0972	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023
Barium	167	9.72	"	"	"	CIH	"	"
Cadmium	0.159	0.0972	"	"	"	CIH	"	"
Copper	10.8	9.72	"	"	"	CIH	"	"

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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#3@8'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-06 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Lead	ND	9.72	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	U
Nickel	11.5	9.72	"	"	"	CIH	"	"	
Selenium	0.118	0.0972	"	"	"	CIH	"	"	
Silver	ND	0.0972	"	"	"	CIH	"	"	U
Zinc	ND	97.2	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196 A

Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713665		10/05/2023	10/27/2023	
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Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#4@4'
10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-07 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	0.668	0.0986	mg/L	1	B3J1212	KAP	10/12/2023	10/13/2023	
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Metals by Saturated Paste by EPA 6010

Calcium	1.50	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023	
Magnesium	1.23	0.823	"	"	"	KAP	"	"	
Sodium	1.14	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	8.24		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023	
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SAR by 20B Saturated Paste

SAR	0.975	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.425	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023	
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Table 915 metals by EPA 6020B

Arsenic	4.54	0.0854	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Barium	140	8.54	"	"	"	CIH	"	"	
Cadmium	0.208	0.0854	"	"	"	CIH	"	"	
Copper	11.5	8.54	"	"	"	CIH	"	"	

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#4@4'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-07 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
Lead	9.17	8.54	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Nickel	11.1	8.54	"	"	"	CIH	"	"	
Selenium	0.149	0.0854	"	"	"	CIH	"	"	
Silver	ND	0.0854	"	"	"	CIH	"	"	U
Zinc	ND	85.4	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196 A

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713665		10/05/2023	10/27/2023	

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#4@8'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-08 (Soil)
Origins Laboratory, Inc.

Boron (DTPA Sorbitol)

Boron	1.05	0.101	mg/L	1	B3J1212	KAP	10/12/2023	10/13/2023
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Metals by Saturated Paste by EPA 6010

Calcium	0.730	0.499	meq/L	10	[CALC]	KAP	10/12/2023	10/13/2023
Magnesium	ND	0.823	"	"	"	KAP	"	"
Sodium	7.39	0.435	"	"	"	KAP	"	"

pH in Soil by 9045D

pH	8.41		pH Units	1	B3J1216	HJD	10/12/2023	10/13/2023
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SAR by 20B Saturated Paste

SAR	8.85	0.0100	SAR	1	B3J1208	KAP	10/12/2023	10/13/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.02	0.00500	mmhos/cm	1	B3J1216	HJD	10/12/2023	10/13/2023
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Table 915 metals by EPA 6020B

Arsenic	4.61	0.0854	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023
Barium	85.5	8.54	"	"	"	CIH	"	"
Cadmium	0.156	0.0854	"	"	"	CIH	"	"
Copper	10.9	8.54	"	"	"	CIH	"	"

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

BG#4@8'

10/5/2023 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y310230-08 (Soil)

Origins Laboratory, Inc.

Table 915 metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
Lead	10.7	8.54	mg/kg	10	B3J0902	CIH	10/09/2023	10/11/2023	
Nickel	11.0	8.54	"	"	"	CIH	"	"	
Selenium	0.118	0.0854	"	"	"	CIH	"	"	
Silver	ND	0.0854	"	"	"	CIH	"	"	U
Zinc	ND	85.4	"	"	"	CIH	"	"	U

Waypoint Analytical, LLC.

Total Metals by 7196 A

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
Chromium, Hexavalent	ND	0.5	mg/Kg	1	L713665		10/05/2023	10/27/2023	

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3J0902 - EPA 3050B

Blank (B3J0902-BLK1)

Prepared: 10/09/2023 Analyzed: 10/11/2023

Arsenic	ND	0.000100	mg/kg							U
Barium	ND	0.0100	"							U
Cadmium	ND	0.000100	"							U
Copper	ND	0.0100	"							U
Lead	ND	0.0100	"							U
Nickel	ND	0.0100	"							U
Selenium	ND	0.000100	"							U
Silver	ND	0.000100	"							U
Zinc	ND	0.100	"							U

LCS (B3J0902-BS1)

Prepared: 10/09/2023 Analyzed: 10/11/2023

Arsenic	0.0506	0.000100	mg/kg	0.0500		101	80-120			
Barium	5.06	0.0100	"	5.00		101	80-120			
Cadmium	0.0505	0.000100	"	0.0500		101	80-120			
Copper	0.543	0.0100	"	0.500		109	80-120			
Lead	0.0501	0.0100	"	0.0500		100	80-120			
Nickel	0.0488	0.0100	"	0.0500		97.6	80-120			
Selenium	0.0493	0.000100	"	0.0500		98.6	80-120			
Silver	0.0488	0.000100	"	0.0500		97.6	80-120			
Zinc	0.510	0.100	"	0.500		102	80-120			

Matrix Spike (B3J0902-MS1)

Source: Y310230-01

Prepared: 10/09/2023 Analyzed: 10/11/2023

Arsenic	7.31	0.0906	mg/kg	4.53	2.87	98.2	75-125			
Barium	534	9.06	"	453	78.2	101	75-125			
Cadmium	4.89	0.0906	"	4.53	0.0847	106	75-125			
Copper	54.9	9.06	"	45.3	7.54	105	75-125			
Lead	10.4	9.06	"	4.53	6.64	82.9	75-125			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3J0902 - EPA 3050B										
Matrix Spike (B3J0902-MS1)			Source: Y310230-01			Prepared: 10/09/2023 Analyzed: 10/11/2023				
Nickel	9.60	9.06	mg/kg	4.53	6.16	76.0	75-125			
Selenium	4.24	0.0906	"	4.53	0.102	91.3	75-125			
Silver	4.57	0.0906	"	4.53	0.0186	100	75-125			
Zinc	77.2	90.6	"	45.3	33.8	95.8	75-125			U
Matrix Spike Dup (B3J0902-MSD1)			Source: Y310230-01			Prepared: 10/09/2023 Analyzed: 10/11/2023				
Arsenic	7.63	0.0984	mg/kg	4.92	2.87	96.9	75-125	4.27	20	
Barium	581	9.84	"	492	78.2	102	75-125	8.48	20	
Cadmium	5.31	0.0984	"	4.92	0.0847	106	75-125	8.30	20	
Copper	58.9	9.84	"	49.2	7.54	104	75-125	6.98	20	
Lead	11.1	9.84	"	4.92	6.64	90.4	75-125	6.45	20	
Nickel	10.7	9.84	"	4.92	6.16	92.3	75-125	10.8	20	
Selenium	4.69	0.0984	"	4.92	0.102	93.2	75-125	10.1	20	
Silver	4.92	0.0984	"	4.92	0.0186	99.5	75-125	7.37	20	
Zinc	81.6	98.4	"	49.2	33.8	97.3	75-125	5.62	20	U

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3J1208 - Saturated Paste Metals										
Blank (B3J1208-BLK1)					Prepared: 10/12/2023 Analyzed: 10/13/2023					
Calcium PPM	ND	10.0	mg/L							U
SAR	ND	0.0100	SAR							U
Magnesium PPM	ND	10.0	mg/L							U
Sodium PPM	ND	10.0	"							U
Duplicate (B3J1208-DUP1)		Source: Y310230-01			Prepared: 10/12/2023 Analyzed: 10/13/2023					
Calcium PPM	276	10.0	mg/L		269			2.58	50	
SAR	ND	0.0100	SAR		6.42				200	U
Magnesium PPM	141	10.0	mg/L		146			3.02	50	
Sodium PPM	484	10.0	"		526			8.36	50	
Batch B3J1211 - DTPA Sorbitol Preparation										
Blank (B3J1211-BLK1)					Prepared: 10/12/2023 Analyzed: 10/13/2023					
Boron	ND	0.100	mg/L							U
Duplicate (B3J1211-DUP1)		Source: Y310230-01			Prepared: 10/12/2023 Analyzed: 10/13/2023					
Boron	0.977	0.0992	mg/L		1.00			2.59	50	
Batch B3J1212 - DTPA Sorbitol Preparation										
Blank (B3J1212-BLK1)					Prepared: 10/12/2023 Analyzed: 10/13/2023					
Boron	ND	0.100	mg/L							U
Duplicate (B3J1212-DUP1)		Source: Y310230-06			Prepared: 10/12/2023 Analyzed: 10/13/2023					
Boron	1.36	0.101	mg/L		1.25			8.84	50	

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

Saturated Paste - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3J1216 - Saturated Paste pH/EC										
Blank (B3J1216-BLK1)					Prepared: 10/12/2023 Analyzed: 10/13/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
Duplicate (B3J1216-DUP1)		Source: Y310230-01			Prepared: 10/12/2023 Analyzed: 10/13/2023					
Specific Conductance (EC)	4.18	0.00500	mmhos/cm		4.33			3.52	25	
pH	8.08		pH Units		8.01			0.870	25	

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

Total Metals by 7196 A - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L713665 -										
DUP (L 88521-DUP)		Source: 88521			Prepared: Analyzed: 10/27/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500		-	0	20	
MS (L 88521-MS)		Source: 88521			Prepared: Analyzed: 10/27/2023					
Chromium, Hexavalent	37.3	2.51	mg/Kg	40.2	<1.22	93	75-125			
LCS (LCS)		Prepared: Analyzed: 10/27/2023								
Chromium, Hexavalent	7.16	0.5	mg/Kg	8		90	75-125			
LRB (LRB)		Prepared: Analyzed: 10/27/2023								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
 1700 Lincoln St #4550
 Denver CO 80203

Levi Kirk
 Project Number: [none]
 Project: McElwain 32-17

Total Metals by 7196A - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L713664 -										
DUP (L 88508-DUP)		Source: 88508			Prepared: Analyzed: 10/27/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500		-	0	20	
MS (L 88508-MS)		Source: 88508			Prepared: Analyzed: 10/27/2023					
Chromium, Hexavalent	36.4	2.5	mg/Kg	40	<1.22	91	75-125			
LCS (LCS)		Prepared: Analyzed: 10/27/2023								
Chromium, Hexavalent	6.93	0.5	mg/Kg	8		87	75-125			
LRB (LRB)		Prepared: Analyzed: 10/27/2023								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

Levi Kirk
Project Number: [none]
Project: McElwain 32-17

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager