

Report Transmission Cover Page

Bill To: The Black Dirt Company	Project ID:	Lot ID: 1724057
Box 3130	Project Name:	Control Number:
Spruce Grove, AB, Canada	Project Location:	Date Received: Apr 9, 2024
T7X 3A5	LSD:	Date Reported: Apr 23, 2024
Attn: Accounts Payable	P.O.:	Report Number: 2995704
Sampled By:	Proj. Acct. code:	Report Type: Final Report
Company:		

Contact	Company	Address
Accounts Payable	The Black Dirt Company	Box 3130 Spruce Grove, AB T7X 3A5 Phone: (780) 962-8220 Fax: (780) 962-8215 Email: info@blackdirtcompany.com

Delivery	Format	Deliverables
Email - Merge	PDF	COC / Invoice

Jaclyn McGowan	The Black Dirt Company	Edmonton, AB Phone: (000) 000-0000 Fax: Email: jaclyn.mcgowan@blackdirtcompany.com
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Delivery	Format	Deliverables
Email	PDF	COC / Test Report
Email	Standard Crosstab With Tabs	Test Report
Email - Merge	PDF	COA

Ryan Townsend	The Black Dirt Company	Spruce Grove, AB Phone: (780) 962-8220 Fax: Email: ryan.townsend@blackdirtcompany.com
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Delivery	Format	Deliverables
Email	PDF	COC / Test Report
Email	Standard Crosstab With Tabs	Test Report

Notes To Clients:

- Apr 11, 2024 - weed seed analysis was performed by a subcontract laboratory. See attached 1 page reports 1184382-01, 1184383-01, 1184384-01, & 1184385-01

Analytical Report

Bill To: The Black Dirt Company Box 3130 Spruce Grove, AB, Canada T7X 3A5 Attn: Accounts Payable Sampled By: Company:	Project ID: Project Name: Project Location: LSD: P.O.: Proj. Acct. code:	Lot ID: 1724057 Control Number: Date Received: Apr 9, 2024 Date Reported: Apr 23, 2024 Report Number: 2995704 Report Type: Final Report
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Reference Number 1724057-4
Sample Date Apr 09, 2024
Sample Time NA
Sample Location
Sample Description Peavey / TOPSOIL

Analyte	Matrix	Units	Soil	Results	Nominal Detection Limit
			Results		
Classification					
Organic Matter	Calculated Value	%	18.1		0.04
Carbon	Total Organic	%	9.06		0.04
Metals Strong Acid Digestion					
Antimony	Strong Acid Extractable	mg/kg	<0.2		0.2
Arsenic	Strong Acid Extractable	mg/kg	6.1		0.2
Barium	Strong Acid Extractable	mg/kg	141		1
Beryllium	Strong Acid Extractable	mg/kg	0.2		0.1
Cadmium	Strong Acid Extractable	mg/kg	0.34		0.01
Chromium	Strong Acid Extractable	mg/kg	7.9		0.5
Cobalt	Strong Acid Extractable	mg/kg	6.5		0.1
Copper	Strong Acid Extractable	mg/kg	11		1
Lead	Strong Acid Extractable	mg/kg	6.5		0.1
Mercury	Strong Acid Extractable	mg/kg	<0.05		0.05
Molybdenum	Strong Acid Extractable	mg/kg	<1.0		1.0
Nickel	Strong Acid Extractable	mg/kg	15.6		0.5
Selenium	Strong Acid Extractable	mg/kg	0.7		0.3
Silver	Strong Acid Extractable	mg/kg	<0.1		0.1
Thallium	Strong Acid Extractable	mg/kg	0.09		0.05
Tin	Strong Acid Extractable	mg/kg	<1.0		1.0
Uranium	Strong Acid Extractable	mg/kg	2.0		0.5
Vanadium	Strong Acid Extractable	mg/kg	14.3		0.1
Zinc	Strong Acid Extractable	mg/kg	56		1
Physical and Aggregate Properties					
Texture			Loam		
Sand	50 µm - 2 mm	% by weight	28		0.1
Silt	2 µm - 50 µm	% by weight	48		0.1
Clay	<2 µm	% by weight	24		0.1
Salinity					
Electrical Conductivity	Saturated Paste	dS/m	3.69		0.01
SAR	Saturated Paste		0.8		
% Saturation		%	100		
Calcium	Saturated Paste	mg/kg	694		
Magnesium	Saturated Paste	mg/kg	134		
Sodium	Saturated Paste	mg/kg	92		
Potassium	Saturated Paste	mg/kg	20		
Chloride	Saturated Paste	mg/L	57		3
Chloride	Saturated Paste	mg/kg	56		
Sulfate (SO4)	Saturated Paste	mg/kg	1580		
Boron	Saturated Paste	mg/L	0.7		0.05

Analytical Report

Bill To: The Black Dirt Company Box 3130 Spruce Grove, AB, Canada T7X 3A5	Project ID: Project Name: Project Location: LSD: P.O.:	Lot ID: 1724057 Control Number: Date Received: Apr 9, 2024 Date Reported: Apr 23, 2024 Report Number: 2995704 Report Type: Final Report
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Reference Number	1724057-4
Sample Date	Apr 09, 2024
Sample Time	NA
Sample Location	
Sample Description	Peavey / TOPSOIL
Matrix	Soil

Analyte	Units	Results	Results	Results	Nominal Detection Limit
Salinity - Continued					
TGR	Saturated Paste	T/ac	<0.1		
Soil Acidity					
pH	1:2 Soil:Water	pH	7.5		
pH	1:2 Soil:CaCl2 sol.	pH	7.5		
Electrical Conductivity	1:2 Soil:Water	dS/m at 25 °C	2.10		0.01
CCE	as CaCO3	%	16.90		0.2
Water Soluble Parameters					
Chromium (VI)	Dry Weight	mg/kg	<0.05		0.05
Clubroot Analysis					
Plasmodiophora brassicae	Clubroot Pathogen	spores/g	<1000		1000
Plasmodiophora brassicae	Detected/ Not Detected	spores/g	Not Detected		1000
Subcontracted Analysis					
Subcontractor Report Id	Biovision		1184384-01		

Approved by: 
Mike Yohemas, BSc
General Manager

Data have been validated by Analytical Quality Control and Element's Integrated Data Validation System (IDVS).

Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

Methodology and Notes

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Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
1:5 Water Soluble Extraction	APHA	* Colorimetric Method, 3500-Cr B	Apr 9, 2024	Element Edmonton - Roper Road
1:5 Water Soluble Extraction	McKeague	* Soluble Salts in Extracts of 1:5 Soil:Water Mixtures, 3.23	Apr 9, 2024	Element Edmonton - Roper Road
Calcium Carbonate in Soil (Dual pH)	Comm. Soil Sci. Pl. Anal.	* Improvement to Two Routine Methods for CaCO ₃ in Soil, Vol 28, 1997	Apr 10, 2024	Element Edmonton - Roper Road
Clubroot	Plant Path	* Wallenhammer et al 2012. In-Field distribution of Plasmodiophora brassicae measured using real-time PCR., Plant Pathology	Apr 22, 2024	Element Calgary
Metals ICP (Hot Block) in soil	EPA	* Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements, October 1999, 200.2	Apr 10, 2024	Element Edmonton - Roper Road
Metals ICP (Hot Block) in soil	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	Apr 10, 2024	Element Edmonton - Roper Road
Particle Size Analysis - GS	Carter	* Hydrometer Method, 55.3	Apr 9, 2024	Element Edmonton - Roper Road
pH and Conductivity in general soil 1:2	McKeague	* 1:2 Soil:Water Ratio, 4.12	Apr 9, 2024	Element Edmonton - Roper Road
pH and Conductivity in general soil 1:2	Soil & Environ. Anal.	* Particle Size Analysis, Direct Method, Chapter 7	Apr 9, 2024	Element Edmonton - Roper Road
pH by CaCl ₂ (1:2 ratio) in soil	McKeague	* pH in 0.01M Calcium Chloride, 3.11	Apr 9, 2024	Element Edmonton - Roper Road
Saturated Paste in General Soil	APHA	* Automated Ferricyanide Method, 4500-Cl-E	Apr 9, 2024	Element Edmonton - Roper Road
Saturated Paste in General Soil	Carter	* Electrical Conductivity and Soluble Ions, Chapter 15	Apr 9, 2024	Element Edmonton - Roper Road
Sublet to Biovision	Ext. Lab	See attached test report,	Apr 10, 2024	SGS Biovision
Total Carbon, Nitrogen in Soil by Leco Combustion (VAN)	SSSA Book Series 5	* Total Carbon, Organic Carbon, and Organic Matter, Ch 34	Apr 17, 2024	Element Vancouver

* Reference Method Modified

References

APHA	Standard Methods for the Examination of Water and Wastewater
Carter	Soil Sampling and Methods of Analysis.
Comm. Soil Sci. Pl.	Communications in Soil Science and Plant Analysis
EPA	Environmental Protection Agency Test Methods - US
Ext. Lab	External Laboratory
McKeague	Manual on Soil Sampling and Methods of Analysis
Plant Path	Plant Pathology
Soil & Environ. Anal.	Soil and Environmental Analysis: Physical Methods
SSSA Book Series 5	Methods of Soil Analysis, Part 3
US EPA	US Environmental Protection Agency Test Methods

Methodology and Notes

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Comments:

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Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

Submitted By:
 Element (Edm)
 7217 Roper Road NW
 Edmonton, AB CA T6B 3J4
 P 780.438.5522

Tested By: SGS Canada Inc.
 Unit 310, 280 Portage Close
 Sherwood Park, Alberta T8H 2R6
 P 1 (780) 436-8822
 ** CFIA Acc #1172

Professional Member



Sample of: Soil
Designated: POC148494
Sample ID: 1724057-4, Peavy Topsoil

REPORT OF ANALYSIS

*Soil Seed Analysis - 50g	Completed: 4/11/2024	Soil	Method	OTH
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Lamb's-quarters 2
 Goosefoot 1
 Canola 1
 Pale Smartweed 1
 Perennial Sow Thistle 1

1. Method(s) used for promoting germination of dormant seed

*Advisory test -- Method not CFIA M&P prescribed

**Accredited by CFIA to conduct tests in accordance with the laboratory's scope of accreditation and the Canadian Methods and Procedures for Testing Seed

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