

**CALCIUM PRODUCTS INC
CALCIUM PRODUCTS INC
2520 N LOOP DR STE 7100
AMES IA 50010-8279**

REPORT OF ANALYSIS

For: (7294) CALCIUM PRODUCTS INC
AG LIME

Analysis	Level Found		Reporting			Analyst- Date	Verified- Date
	As Received	Units	Limit	Method			
Sample ID: WINDOM PILE 2	Lab Number: 2859357	Date Sampled: 2018-10-01					
Moisture	9.2	%	0.1	SM 2540 G-(1997)	bjs0-2018/10/18	asl4-2018/10/19	
Calcium (total)	22.4	%	0.01	MWL ME PROC 26	trh1-2018/10/18	asl4-2018/10/19	
Magnesium (total)	9.34	%	0.01	MWL ME PROC 26	trh1-2018/10/18	asl4-2018/10/19	
Total neutralizing value (CaCO ₃ eq)	89.4	%	0.1	AOAC 955.01	eas2-2018/10/18	asl4-2018/10/19	
ECCE	68.0	%	0.1	Calculation	Auto-2018/10/22	Auto-2018/10/22	
% passing 4 sieve	100	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% passing 8 sieve	100	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% passing 20 sieve	85.1	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% passing 30 sieve	77.8	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% passing 60 sieve	60.2	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% passing 80 sieve	53.5	%	0.0	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% passing 100 sieve	50.0	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% passing 200 sieve	36.4	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	
% retained pan	36.4	%	0.1	ASTM E 276-13 (mod)	jaj4-2018/10/22	asl4-2018/10/22	

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.

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REPORT NUMBER

18-295-4177

REPORT DATE
Oct 22, 2018

SEND TO
7294

RECEIVED DATE
Oct 17, 2018



13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770
www.midwestlabs.com

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ISSUE DATE
Oct 22, 2018

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Analysis	Level Found As Received	Units	Reporting Limit	Method	Analyst- Date	Verified- Date
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All results are reported on an AS RECEIVED basis.

cc: Account(s) 29154 EFC EMAILING

For questions please contact:

Rob Ferris
Account Manager
rferris@midwestlabs.com (402)829-9871

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Detailed Method Description(s)**SM 2540 G**

Analysis follows MWL WC 060 which is based on SM 2540 G. A sample is weighed placed in a vacuum drying oven to drive off the moisture and re-weighed. The sample is then placed in a muffle furnace at 550°C, cooled, and re-weighed. The residue remaining is the ash and the mass lost is the volatile matter.

ICP Analysis Fertilizers AOAC 985.01 (mod)

Analysis follows MWL ME 026 which is based on AOAC 985.01. Samples have been prepared using MWL WC 056. Total minerals in fertilizers have been prepared by AOAC 957.02 using mineral acids and heat. Water soluble manganese is prepared by AOAC 972.03 and the other water soluble by AOAC 977.01. Sample analysis involves moving the sample extract into the ICP where it is nebulized and introduced into the high temperature plasma which energizes the electrons of the dissolved minerals/metals. As the energized electrons of the minerals/metals return to ground state, energy is released as light. The emitted wavelength(s) and light intensities are used to identify and quantitate the minerals/metals in the sample

AOAC 955.01

Analysis follows MWL WC 039 which is based on AOAC 955.01. A sample is treated with an excess of acid and then back-titrated with a known base to a phenolphthalein end point

Calculation

Analytical results are entered into applicable formulas to provide a calculated result which is reported.

Wet Sieve

Sample analysis follows MWL WC 070 which is based on ASTM E 276. A known mass of a solid is obtained and a pre-determined set of sieves obtained. The sample is placed on the upper most (largest screen size) and the sample washed with water to wash the materials through the sieves. The material retained on the individual sieves is removed and weighed and the percent of the total passing through the sieve is calculated and reported.

Fertilizer Prep AOAC 957.02

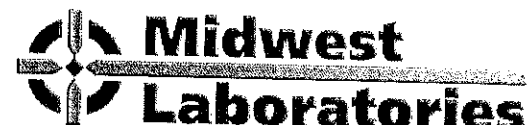
Samples are prepared using a combination of nitric acid and heat. The heating takes place in a block digester

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2859357-357
Samples: Page:
1 1/1
Lara L. Mikels
2018 10 17 11:33



18.8%
IR14

Sample Submission for Laboratory Analysis

Type: Aglime
Sample ID: windom pile 2
Date Collected: 10/1/2018

Please charge to:
Account #7294

Collected By: Ritchie Schaefer

email copy to:
andrew.hoiberg@calciumproducts.com

Phone: _____

Email: _____

Additional Information: **2859357**

Notes to Midwest Labs:

If sample is:

- **Aglime:** Please run standard 'Lime' analysis with sieves 30, 100, 200, and pan added.
- **Gypsum:** Please run standard 'Gypsum' analysis with 'WA Heavy Metals' analysis added.
- **By-Product Lime:** Please run standard 'Lime' analysis with sieves 30, 100, 200, and pan added, along with WA heavy metals and aluminum.
- **By-Product Gypsum:** Please run standard 'Gypsum' analysis with 'WA Heavy Metals' analysis added.