

**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: ROGERS GROUP Lab Number: 8699295 Date Sampled: 2019-11-20						
Moisture	3.7	%	0.1	SM 2540 G-(1997)	lkm2-2019/11/27	asl4-2019/12/03
Calcium (total)	33.6	%	0.01	MWL ME PROC 26	trh1-2019/11/27	asl4-2019/12/03
Magnesium (total)	1.71	%	0.01	MWL ME PROC 26	trh1-2019/11/27	asl4-2019/12/03
Total neutralizing value (CaCO ₃ eq)	91.7	%	0.1	AOAC 955.01	eas2-2019/12/02	asl4-2019/12/03
ECCE	58.2	%	0.1	Calculation	Auto-2019/12/02	Auto-2019/12/03
% passing 4 sieve	100	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% passing 8 sieve	91.4	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% passing 20 sieve	64.9	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% passing 30 sieve	57.7	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% passing 60 sieve	43.4	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% passing 80 sieve	39.6	%	0.0	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% passing 100 sieve	37.9	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% passing 200 sieve	32.3	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03
% retained pan	32.3	%	0.1	ASTM E 276-13 (mod)	may8-2019/12/02	asl4-2019/12/03

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

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REPORT NUMBER

19-337-4065

REPORT DATE
Dec 03, 2019

RECEIVED DATE
Nov 25, 2019

SEND TO
7294



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

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ISSUE DATE
Dec 03, 2019

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Analysis	Level Found	Units	Reporting	Method	Analyst-	Verified-
	As Received		Limit		Date	Date

All results are reported on an AS RECEIVED basis.

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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8699295-295
Samples: Page:
1 1/1
Ashlyn Himen
2019 11 28 11:42



Sample Submission for Laboratory Analysis

Type: Ag Lime
Sample ID: Rogers Group
Date Collected: 11/20/19

Please charge to:
Account #7294

email copy to:
andrew.hoiberg@calciumproducts.com

Collected By: Matthew Dinwiddie
Phone: 931-829-2174
Email: danny.clark@nutrien.com

Additional Information:

Also Email: matthew.dinwiddie@nutrien.com

8699295

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.

13.05.19