REPORT NUMBER
24-004-4024

REPORT DATE
Jan 04, 2024

SEND TO
7294

RECEIVED DATE
Dec 28, 2023

Midwest Laboratories®
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ISSUE DATE
Jan 04, 2024

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

REPORT OF ANALYSIS

For: (7294) CALCIUM PRODUCTS INC
Lime samples
P43436

Analysis	Level Found As Received	Units	Reporting Limit	Method	Analyst-Date	Verified-Date
Sample ID: **By-Product Lime Brewster, MN**	Lab Number: **70396390**		Date Sampled: **2023-11-02**			
Moisture	n.d.	%	0.1	SM 2540 G-(2015)	jsa6-2023/12/29	eas2-2024/01/02
Calcium (total)	38.3	%	0.01	MWL ME PROC 26	jdg9-2023/12/29	tat9-2024/01/03
Magnesium (total)	0.25	%	0.01	MWL ME PROC 26	jdg9-2023/12/29	tat9-2024/01/03
Total neutralizing value (CaCO3 eq)	98.9	%	0.1	AOAC 955.01	eas2-2024/01/03	tat9-2024/01/03
ECCE	73.8	%	0.1	Calculation	Auto-2024/01/04	Auto-2024/01/04
% passing 4 sieve	99.4	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 8 sieve	98.1	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 20 sieve	85.9	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 30 sieve	80.1	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 60 sieve	58.7	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 80 sieve	49.5	%	0.0	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 100 sieve	45.5	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 200 sieve	20.4	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% retained pan	20.4	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04

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

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

All results are reported on an AS RECEIVED basis, n.d. = not detected

For questions please contact:

Stefanie Rath
Account Manager
srath@midwestlabs.com (402)829-9881

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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 digestor