REPORT NUMBER

# 24-004-4022 REPORT DATE

Jan 04, 2024 RECEIVED DATE Dec 28, 2023 send to **7294**  A Midwest Laboratories 13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 www.midwestlabs.com



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

	Leve	l Found		Reporting		Analyst-	Verified-
Analysis	As	Received	Units	Limit	Method	Date	Date
Sample ID: Zeandale, KS	ab Number: 70396388	Date Samp	led: 2023-12	-27			
Moisture		3.2	%	0.1	SM 2540 G-(2015)	jsa6-2023/12/29	eas2-2024/01/02
Calcium (total)		32.0	%	0.01	MWL ME PROC 26	jdg9-2023/12/29	tat9-2024/01/03
Magnesium (total)		0.89	%	0.01	MWL ME PROC 26	jdg9-2023/12/29	tat9-2024/01/03
Total neutralizing value (CaCO	D3 eq)	80.1	%	0.1	AOAC 955.01	eas2-2024/01/03	tat9-2024/01/03
ECCE		62.5	%	0.1	Calculation	Auto-2024/01/04	Auto-2024/01/04
% passing 4 sieve		100	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 8 sieve		97.7	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 20 sieve		90.8	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 30 sieve		84.6	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 60 sieve		64.6	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 80 sieve		57.4	%	0.0	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 100 sieve		55.5	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% passing 200 sieve		42.7	%	0.1	ASTM E 276-13 (mod)	ach3-2024/01/04	tat9-2024/01/04
% retained pan		42.7	%	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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**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

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

All results are reported on an AS RECEIVED basis

For questions please contact:

Stefanie Rath

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

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SEND TO 7294





**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

## **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