

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

REPORT OF ANALYSIS

For: (7294) CALCIUM PRODUCTS INC
LIME SAMPLE ANALYSIS
P26430

Analysis	Level Found		Reporting			Analyst- Date	Verified- Date
	As Received	Units	Limit	Method			
Sample ID: ELWOOD STACK LIME		Lab Number: 2508778		Date Sampled: 2016-03-22			
Moisture	3.4	%	0.1	SM 2540 G-(1997) *	cmw2-2016/03/28	mjs5-2016/03/28	
Calcium (total)	20.0	%	0.01	MWL ME PROC 26 *	cvs7-2016/03/24	mjs5-2016/03/28	
Magnesium (total)	12.0	%	0.01	MWL ME PROC 26 *	cvs7-2016/03/24	mjs5-2016/03/28	
Total neutralizing value (CaCO3 eq)	98.9	%	0.1	AOAC 955.01 *	acm2-2016/03/25	mjs5-2016/03/28	
ECCE	47.5	%	0.1	Calculation *	Auto-2016/03/28	Auto-2016/03/28	
% passing 4 sieve	93.7	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	
% passing 8 sieve	71.2	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	
% passing 30 sieve	37.2	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	
% passing 60 sieve	28.8	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	
% passing 100 sieve	24.2	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	
% passing 200 sieve	16.8	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	
Sample ID: WHITE LIME - LIMWOOD		Lab Number: 2508779		Date Sampled: 2016-03-22			
Moisture	1.4	%	0.1	SM 2540 G-(1997) *	cmw2-2016/03/28	mjs5-2016/03/28	
Calcium (total)	33.7	%	0.01	MWL ME PROC 26 *	cvs7-2016/03/24	mjs5-2016/03/28	
Magnesium (total)	0.70	%	0.01	MWL ME PROC 26 *	cvs7-2016/03/24	mjs5-2016/03/28	
Total neutralizing value (CaCO3 eq)	87.1	%	0.1	AOAC 955.01 *	acm2-2016/03/25	mjs5-2016/03/28	
ECCE	35.8	%	0.1	Calculation *	Auto-2016/03/28	Auto-2016/03/28	
% passing 4 sieve	93.5	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	
% passing 8 sieve	62.5	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28	

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

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.



13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121
www.midwestlabs.com

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

REPORT OF ANALYSIS

For: (7294) CALCIUM PRODUCTS INC
LIME SAMPLE ANALYSIS
P26430

Analysis	Level Found	Units	Reporting		Analyst- Date	Verified- Date
	As Received		Limit	Method		
Sample ID: WHITE LIME - LIMWOOD	Lab Number: 2508779 (con't)					
% passing 60 sieve	21.7	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28
% passing 30 sieve	28.4	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28
% passing 100 sieve	19.3	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28
% passing 200 sieve	16.6	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/03/28	mjs5-2016/03/28

All results are reported on an AS RECEIVED basis.

For questions please contact:

Rob Ferris
Account Manager
raf4@midwestlabs.com (402)829-9871

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

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121
www.midwestlabs.com**CALCIUM PRODUCTS INC
2520 N LOOP DR STE 7100
AMES IA 50010-8279****REPORT OF ANALYSIS**For: (7294) CALCIUM PRODUCTS INC
LIME SAMPLE ANALYSIS
P26430**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 which is based on AOAC 957.02 using mineral acids and heat. 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

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

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.