Jan 05, 2016

# **16-008-4029 v2** REPORT DATE **Jan 12, 2016** RECEIVED DATE





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

REPORT OF ANALYSIS For: (7294) CALCIUM PRODUCTS INC CALCIUM PRODUCTS

		Level Found		Reporting		Analyst-	Verified-
Analysis		As Received	Units	Limit	Method	Date	Date
Sample ID: AGL00116	Lab Number: 2480016	Date Sampled:	2016-01-04				
Moisture		7.2	%	0.1	SM 2540 G-(1997) *	bjs0-2016/01/06	mgn8-2016/01/08
Calcium (total)		33.6	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08
Magnesium (total)		0.58	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08
Total neutralizing value (CaCO3 eq)		87.5	%	0.1	AOAC 955.01 *	acm2-2016/01/06	mgn8-2016/01/08
ECCE		52.1	%	0.1	Calculation *	Auto-2016/01/06	Auto-2016/01/08
% passing 4 sieve		99.7	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 8 sieve		95.0	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 30 sieve		51.2	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 60 sieve		35.1	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 100 sieve		30.0	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 200 sieve		24.8	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
Sample ID: AGL00216	Lab Number: 2480017	Date Sampled:	2016-01-04				
Moisture		7.5	%	0.1	SM 2540 G-(1997) *	bjs0-2016/01/06	mgn8-2016/01/08
Calcium (total)		21.9	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08
Magnesium (total)		9.10	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08
Total neutralizing value (CaCO3 eq)		89.9	%	0.1	AOAC 955.01 *	acm2-2016/01/06	mgn8-2016/01/08
ECCE		48.4	%	0.1	Calculation *	Auto-2016/01/06	Auto-2016/01/08
% passing 4 sieve		92.6	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 8 sieve		70.9	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08

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

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# **16-008-4029 v2** REPORT DATE SEND TO **Jan 12, 2016** RECEIVED DATE





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# REPORT OF ANALYSIS For: (7294) CALCIUM PRODUCTS INC CALCIUM PRODUCTS

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

	Le	vel Found		Reporting		Analyst-	Verified-
Analysis		As Received	Units	Limit	Method	Date	Date
Sample ID: AGL00216	Lab Number: <b>2480017</b> (	(con't)					
% passing 30 sieve		47.6	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 60 sieve		38.9	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 100 sieve		35.0	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 200 sieve		29.0	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
Sample ID: ALDEN-2000	Lab Number: 2480018	Date Sampled	d: <b>2016-01-</b>	04			
Moisture		n.d.	%	0.1	SM 2540 G-(1997) *	bjs0-2016/01/06	mgn8-2016/01/08
Calcium (total)		38.3	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08
Magnesium (total)		0.11	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08
Total neutralizing value (CaCO3 eq)		97.1	%	0.1	AOAC 955.01 *	acm2-2016/01/06	mgn8-2016/01/08
ECCE		96.6	%	0.1	Calculation *	Auto-2016/01/06	Auto-2016/01/08
% passing 4 sieve		100	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 8 sieve		100	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 30 sieve		100	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 60 sieve		99.2	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 100 sieve		95.0	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 200 sieve		75.0	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
Sample ID: ALDEN-98G	Lab Number: 2480019	Date Sampled	: 2016-01-0	4			
Moisture		0.3	%	0.1	SM 2540 G-(1997) *	bjs0-2016/01/06	mgn8-2016/01/08
Calcium (total)		37.0	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08

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# REPORT OF ANALYSIS For: (7294) CALCIUM PRODUCTS INC CALCIUM PRODUCTS

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

	Level Found		Reporting	l	Analyst-	Verified-
Analysis	As Received	Units	Limit	Method	Date	Date
Sample ID: ALDEN-98G	Lab Number: <b>2480019</b> (con't)					
Magnesium (total)	0.11	%	0.01	MWL ME PROC 26 *	cvs7-2016/01/06	mgn8-2016/01/08
Total neutralizing value (CaCC	03 eq) 93.3	%	0.1	AOAC 955.01 *	acm2-2016/01/06	mgn8-2016/01/08
ECCE	93.0	%	0.1	Calculation *	Auto-2016/01/06	Auto-2016/01/08
% passing 4 sieve	100	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 8 sieve	100	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 30 sieve	100	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 60 sieve	99.5	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 100 sieve	95.4	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08
% passing 200 sieve	81.4	%	0.1	ASTM E 276-13 (mod) *	eas2-2016/01/06	mgn8-2016/01/08

This report was reissued on 2016-01-12 08:52:54 by lmh7 for the following reason: Added PO Number.

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

For questions please contact:

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

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> REPORT OF ANALYSIS For: (7294) CALCIUM PRODUCTS INC CALCIUM PRODUCTS

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

# **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 digestor

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