20-357-4005

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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 AG LIME

		Level Found		Reporting		Analyst-	Verified-
Analysis		As Received	Units	Limit	Method	Date	Date
Sample ID: COFFEY	_ab Number: 8841106	Date Sampled: 20	020-12-10				
Moisture		2.6	%	0.1	SM 2540 G-(1997)	wib1-2020/12/15	asl4-2020/12/17
Calcium (total)		36.6	%	0.01	MWL ME PROC 26	ras7-2020/12/14	asl4-2020/12/17
Magnesium (total)		0.44	%	0.01	MWL ME PROC 26	ras7-2020/12/14	asl4-2020/12/17
Total neutralizing value ((CaCO3 eq)	86.4	%	0.1	AOAC 955.01	eas2-2020/12/15	asl4-2020/12/17
ECCE		53.9	%	0.1	Calculation	Auto-2020/12/21	Auto-2020/12/22
% passing 4 sieve		100	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% passing 8 sieve		91.6	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% passing 20 sieve		64.1	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% passing 30 sieve		55.8	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% passing 60 sieve		41.5	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% passing 80 sieve		37.4	%	0.0	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% passing 100 sieve		35.8	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% passing 200 sieve		29.3	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22
% retained pan		29.3	%	0.1	ASTM E 276-13 (mod)	ach3-2020/12/21	tat9-2020/12/22

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REPORT OF ANALYSIS

For: (7294) CALCIUM PRODUCTS INC AG LIME

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

All results are reported on an AS RECEIVED basis.

cc: Account(s) 20235 AGRICULTURAL SERVICES

For questions please contact:

Stefanie Rath Account Manager

srath@midwestlabs.com (402)829-9881

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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 AG LIME

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