# University of Minnesota
## Soil Testing Laboratory

### Agricultural Liming Material
### Analysis Report

| Sample Name | % Passing 8 Mesh | % Passing 20 Mesh | % Passing 60 Mesh | FI[1] | TNP[2] % | ENP[3] % | Moisture[4] % | LBS. ENP/Ton |
|---|---|---|---|---|---|---|---|---|
| 122216CPD | 97.9 | 94.8 | 84.6 | 91.3 | 132.0 | 120.5 | 0.1 | 2409 |

[1] Fineness Index (FI) is an expression that takes into account the fact that large particles are less effective in neutralizing soil than small particles. [For example, particles larger than 8 mesh do not contribute to the ALM's neutralizing ability and particles smaller than 60 mesh are rated as completely effective].

[2] Total Neutralizing Power (TNP) [same as Calcium Carbonate Equivalent (CCE)] indicates the neutralizing value of the material as compared to Calcium Carbonate which has a value of 100 percent. The higher the percentage, the more effective the material.

[3] The Effective Neutralizing Power (ENP) provides a single value which can be used in comparing quality of different liming materials. It is based on a combination of the particle size distribution and the CCE, expressed as a percent. [ENP = FI/100 X CCE]

[4] Expressed on a dry weight basis.

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# FERTILIZER REPORT

DAIRYLAND LABORATORIES, INC.
Arcadia, WI 54612
Telephone 608-323-2123

DATE: 10/18/2018
SAMPLE: 001-1810-037296

CUST: Tim Leisz # 7378 ( 0)
299 9th Ave
Turtle Lake , WI 54889

CLIENT: Tim Leisz
DESC: #1

TEST RESULTS:

| | AS-IS | | LBS/TON |
|---|---|---|---|
| | MOISTURE | 2.96% | |
| | TOTAL NITROGEN | 0.07% | 1.40 |
| | PHOSPHORUS | 0.01% | 0.20 |
| (or) | PHOSPHATE | 0.02% | 0.40 |
| | POTASSIUM | 0.05% | 1.00 |
| (or) | POTASH | 0.06% | 1.20 |
| | CALCIUM | 48.15% | 963.00 |
| | MAGNESIUM | 1.53% | 30.60 |
| | SULFUR | 0.05% | 1.00 |
| | BORON | 7.00 ppm | 0.01 |
| | SODIUM | 186.00 ppm | 0.37 |
| | ZINC | 4.00 ppm | 0.01 |
| | IRON | 679.00 ppm | 1.36 |
| | MANGANESE | 57.00 ppm | 0.11 |
| | COPPER | < 1.00 ppm | 0.00 |
| | ALUMINUM | 582.00 ppm | 1.16 |
| | pH | 11.92 | |

This sample was tested under supervision of Dairyland Laboratories.
The test results represent only the sample submitted.

## BILLING INFORMATION

SAMPLED BY: Tim Leisz
SAMPLED FOR: Tim Leisz
PRODUCT: #1

Reference: 0437817
Date: 10/18/2018
Sample: 001-1810-037296

$ 12.00 F/M NITROGEN
$ 9.00 F/M pH
$ 44.00 TOTAL INVOICE

$ 23.00 F/M MINERAL 12-PAK