Plant tissue analysis is an invaluable tool in determining the nutritional needs of plants. It indicates the exact amount of each mineral that the plant is removing from the soil and accumulating in the leaves. Each analysis will present a part of the crop nutrition picture. Plant tissue analysis is also a very effective way to determine if your current fertility program is efficient or if there are ways to modify it to achieve an increased benefit.

Visual symptoms of mineral deficiencies are oftentimes a misleading way of diagnosing the nutritional status of plants because the symptoms of different nutrient deficiencies are similar. Also, non-nutritional problems can appear very similar to deficiencies.

Another way of interpreting plant tissue analysis is to look at optimal ranges. The optimal ranges are widely used in the interpretation of some plant tissue test results. These ranges include upper and lower limits that have been found in crops producing satisfactory yields. To establish these ranges, researchers have compared nutrient levels against yields. While it is important to maintain each nutrient within its optimal range, this system does not address the relationships that may take place between the minerals.

Albion Advanced Nutrition has developed a unique program—Technical Evaluation of Albion Minerals (T.E.A.M.)—to aid in the interpretation of plant tissue analysis results. Albion’s T.E.A.M. analysis not only evaluates how much of each
## T.E.A.M.® Analysis Report

<table>
<thead>
<tr>
<th>Lab Number: 60643</th>
<th>Crop: POTATO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample: 1</td>
<td>Field: HOME PLACE</td>
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<tr>
<td>Date of Report: 25-Apr-02</td>
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</tbody>
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### Analyzed Results

<table>
<thead>
<tr>
<th>Element</th>
<th>%</th>
<th>ppm</th>
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<tbody>
<tr>
<td>N</td>
<td>7.6</td>
<td>3838</td>
</tr>
<tr>
<td>S</td>
<td>0.62</td>
<td>197</td>
</tr>
<tr>
<td>P</td>
<td>0.89</td>
<td>173</td>
</tr>
<tr>
<td>Mg</td>
<td>2.69</td>
<td>113</td>
</tr>
<tr>
<td>Ca</td>
<td>0.34</td>
<td>27</td>
</tr>
<tr>
<td>Na</td>
<td>0.68</td>
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</table>

### Optimal Ranges

<table>
<thead>
<tr>
<th>Element</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mg</td>
<td>0.25</td>
<td>2.5</td>
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<tr>
<td>K</td>
<td>0.3</td>
<td>5</td>
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<tr>
<td>Ca</td>
<td>0.4</td>
<td>5</td>
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<tr>
<td>B</td>
<td>0.7</td>
<td>2</td>
</tr>
<tr>
<td>Mn</td>
<td>0.2</td>
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</tr>
<tr>
<td>Mg</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>K</td>
<td>50</td>
<td>50</td>
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<tr>
<td>Ca</td>
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<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Mn</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

### Nutrient Level

- Very Low
- Low
- Optimum
- High
- Very High

### Mineral Name

- MAGNESIUM (Mg)
- POTASSIUM (K)
- CALCIUM (Ca)
- BORON (B)
- MANGANESE (Mn)
- COPPER (Cu)
- ZINC (Zn)
- IRON (Fe)
- PHOSPHORUS (P)
- SULFUR (S)
- NITROGEN (N)

### Nutrient Index

- Mg: -36
- K: -36
- Ca: -26
- B: -23
- Mn: -10
- Cu: 0
- Zn: 3
- Fe: 14
- P: 34
- S: 34
- N: 47

### T.E.A.M.® Recommendations

- 48.0 FL OZ/AC METALOSATE MAGNESIUM
- 48.0 FL OZ/AC METALOSATE POTASSIUM
- 24.0 FL OZ/AC METALOSATE CALCIUM
- 8.0 FL OZ/AC METALOSATE BORON

**By:** [Signature]
Analyzed Results Section
The report shows the actual results from the tissue analysis. The first seven elements are expressed as a percentage of dry matter. The last seven elements are expressed as a parts-per-million (ppm) concentration.

Nutrient Index Column
This number represents a calculated index for each mineral. A negative index indicates a relative level is too low, zero is the optimal level, and a positive number means the relative nutrient concentration is high.

Optimal Ranges Section
Here the optimal ranges for all the analyzed nutrients with the exception of nitrate nitrogen are reported. These numbers are crop specific and have been taken from published research, textbooks, and historical data. These values represent the appropriate level for each nutrient necessary for maximized crop health, quality, and production.

T.E.A.M. Recommendations
Based on the measured levels of nutrients within the plant, the T.E.A.M. program makes a recommendation for the foliar application of nutrients to correct the deficiency or the imbalance. In most cases the amount of Metalosate products recommended by T.E.A.M. will be adequate to satisfy the need of the crop at the time of the analysis. It is best to split the T.E.A.M. recommendations into multiple applications made over a two- to four-week period. This allows for more efficient translocation of the minerals within the plant tissue. It is possible that additional applications will be necessary if the deficiency is severe or at critical stages when the requirement for specific minerals is greater in the crop.

Nutrient Level Column
This column reports a rating for each nutrient ranging from deficient to optimal to excessive based on the content of the mineral in the leaf. The most deficient elements are placed at the top of the list, and the nutrients present in greater abundance are placed at the bottom of the list.

Mineral Name Column
This column reports the mineral name along with its chemical symbol in parenthesis.
nutrient is found in the tissue and compares that finding against its optimal level, but the T.E.A.M. program also measures the relationships between the minerals. The program ranks the minerals based on their limitation to optimal crop production. At the bottom of the T.E.A.M. report, recommendations are listed for the foliar application of nutrients to correct nutrient deficiencies or imbalances. In the case of the macronutrients (N, P, K, & S) the foliar application should only be considered a supplement to these elements being supplied by the soil. In most cases soil applications of these elements will be required in addition to the recommended foliar sprays. The amount of the Metalosate® products recommended by T.E.A.M. will be adequate to satisfy the need of the crop at the time of the analysis. This allows for more efficient translocation of the minerals within the plant tissue. It is best to split the T.E.A.M. recommendations into multiple applications made over a two- to four-week period.

When trying to determine plant nutritional needs, plant tissue analysis can provide some important information. Being able to accurately interpret the results of a tissue test is critical to success. Albion’s unique T.E.A.M. reporting system provides you with all of the necessary information to accurately diagnose and address specific nutritional problems. Please contact one of the Albion representatives listed below to answer any questions you may have. 📞

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