this station has shown that under certain conditions ordinarily decreases while in storage. Work on the factors responsible for these changes is progressing but of necessity must cover a long period of time and involve a great number of factors. Several interesting results have been secured to date, and it is felt that they are of enough importance to the field of plant chemistry to be published prior to the main body of the work which will be published at a later date.

One of the most interesting facts discovered is that the term “calcium carbonate added to neutralize the acidity” is most uncertain. Plant samples prepared in the usual manner by adding an excess of CaCO₃ have been found in most cases to be distinctly acid, the amount of acidity, of course, depending upon the material preserved. Approximate hydrogen ion determinations have been made on a number of solutions using the colorimetric procedure, and they have been found to range from pH 4.6 to 6.0. The following figures may be given as an example of their acidity. Five cc portions of several of these samples were brought to approximate neutrality, using N/10 NaOH.

<table>
<thead>
<tr>
<th>Plant</th>
<th>pH 4.2</th>
<th>pH 8.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>NH₄</td>
<td>Date</td>
</tr>
<tr>
<td>2-27-29</td>
<td>2.72</td>
<td>2-27-29</td>
</tr>
<tr>
<td>3-12-29</td>
<td>2.90</td>
<td>3-12-29</td>
</tr>
<tr>
<td>5-22-29</td>
<td>4.00</td>
<td>5-22-29</td>
</tr>
<tr>
<td>11-7-29</td>
<td>4.63</td>
<td>11-7-29</td>
</tr>
</tbody>
</table>

From Table I we see that there is a continuous increase in the amount of ammonia and that this increase is much greater in the alkaline solution. In all the solutions examined (grapes, celery, lettuce, spinach) there has been found some increase in ammonia on standing, both in acid and alkaline solutions. In some, however, the increase has been small and perhaps in samples of other materials would be negligible.

No explanation of these changes can be given until further work is completed, but on the basis of the present work it does not seem that the increase in ammonia results from a deaminization of amino acids even though we do know that the amount of alpha amino nitrogen decreases in some of these solutions.

In conclusion it seems that this question of alcoholic storage has not received the attention it should and that to make our plant analyses of value when we use this procedure a host of questions bearing on this field should be answered. This laboratory is continuing its work, but the need for some satisfactory method of preserving plant material for analyses is so pressing that it offers a ready field to the experimenter, and one that should well repay the research workers.

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