

Proper handling of chemical test equipment

This test equipment is designed to provide years of dependable service. Following these suggestions will help increase equipment performance:

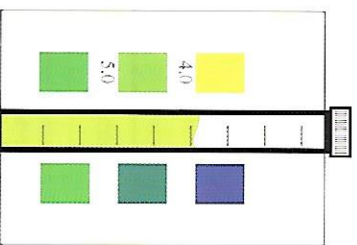
1. Carefully follow all instructions.
2. Do not handle tablets; dispense from cap to test tube.
3. Carefully wash and rinse all apparatus used.
4. Tighten reagent caps immediately after use. Do not interchange caps.
5. Avoid prolonged exposure to direct sunlight.
6. Avoid temperature extremes.
7. Anticipate your requirements for replacement reagents.
8. Keep all reagent containers out of reach of young children.
9. Reagents marked with an * are considered potential health hazards. Read MSDS at www.lannotte.com before use.

Read the Garden Guide Manual

The accompanying *Garden Guide Manual* provides:

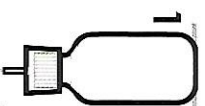
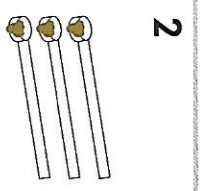

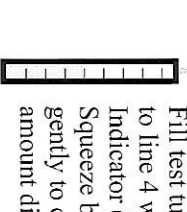
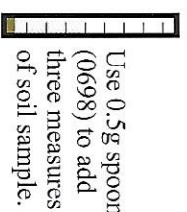
1. Instructions on the proper collection and preparation of soil samples.
2. Essential information for interpretation of test results.
3. Lime and fertilizer recommendations.
4. A soil test record form.

Reading the Color Charts

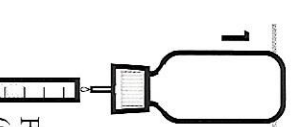
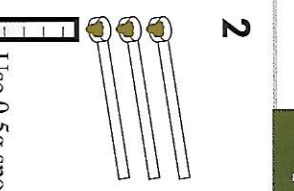



When matching a test color to a color chart, stand with the light source behind the observer and hold the test tube approximately one-half inch away from the color chart. If the color of a test reaction falls between two standard colors on a color chart, the mid-point between the two standard values is taken as the test result. For example, a pH test color reaction falling between the standard colors for pH 4.0 and pH 5.0 represents a test result of pH 4.5. In the other tests color reactions may either match, fall between, or fall beyond the three standard colors representing "Low," Medium," and "High." Therefore seven different test results are possible: Very Low, Low, Medium Low, Medium, Medium High, High, and Very High.

pH Test

- 1  Fill test tube (0755) to line 4 with pH Indicator (5701). Squeeze bottle gently to control amount dispensed.
- 2  Use 0.5g spoon (0698) to add three measures of soil sample.
- 3  Cap and mix gently for one minute.
- 4  Allow tube to stand for 10 minutes to let soil settle.
- 5  Match color reaction with pH Color Chart (1353). Record result as pH.

Phosphorus Test

- 1  Fill test tube (0755) to line 6 with *Phosphorus Extracting Solution (5704).
- 2  Use 0.5g spoon (0698) to add three (3) measures of soil sample.
- 3  Cap and mix gently for one minute.

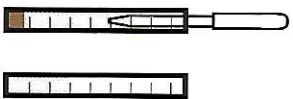
Phosphorus Test, continued

4



Remove cap. Allow to stand, and soil to settle, until liquid above soil is clear.

5



Use one pipet (0364) to transfer the clear liquid to a second clean test tube. To avoid agitation of soil, squeeze bulb of pipet before inserting tip into liquid. Release bulb slowly to draw clear liquid into pipet. Do not pull up any soil. Fill second tube to line 3.

6



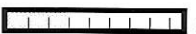
Add six (6) drops of *Phosphorus Indicator Reagent (5705) to soil extract in second tube.

7



Cap and mix.

8



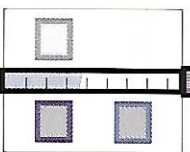
Add one *Phosphorus Test Tablet (5706A).

9



Cap and mix until tablet dissolves. A blue color will develop.

10



Match color reaction with

Phosphorus Color Chart (1372).

Record result as Phosphorus.

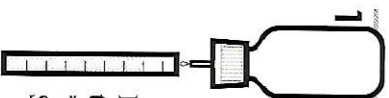
Low 0-50 lb/acre

Medium 50-100 lb/acre

High +100 lb/acre

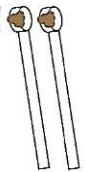
Nitrogen Test

1



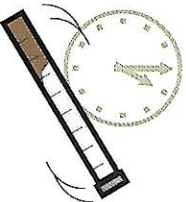
Fill test tube (0755) to line 7 with *Nitrogen Extracting Solution (5702).

2



Use 0.5g spoon (0698) to add two measures of soil sample.

3



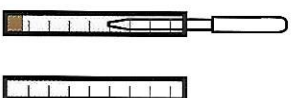
Cap and mix gently for one minute.

4



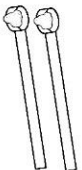
Remove cap and allow soil to settle.

5



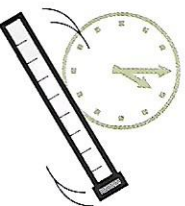
Use a clean pipet (0364) to transfer the clear liquid to a second test tube. To avoid agitation of soil, squeeze bulb of pipet before inserting tip into liquid. Release bulb slowly to draw clear liquid into pipet. Do not pull up any soil. Fill second tube to line 3 with liquid.

6



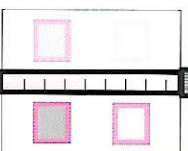
Use 0.25g spoon (0695) to add two measures of *Nitrogen Indicator Powder (5703) to soil extract in second tube.

7



Cap and gently mix. Wait 5 minutes for pink color to develop above the powder.

8



Match test color with

Nitrogen Color Chart (1371).

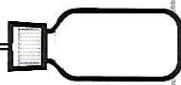
Record as Nitrogen.

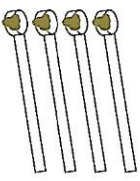
Low 0-30 lb/acre


Medium 30-60 lb/acre


High +60 lb/acre

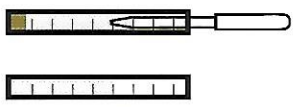
Potassium (Potash) Test

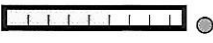
1  Fill test tube (0755) to line 7 with Potassium Extracting Solution (5707)

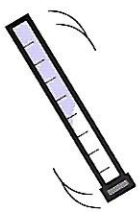
2  Use 0.5g spoon (0698) to add four (4) measures of soil sample to test tube.


3  Cap and shake vigorously for one minute.

4  Remove cap and allow soil to settle.

5  Use a clean pipet (0364) to transfer the clear liquid to a second clean test tube. Be careful not to pull up any soil into pipet. Fill second tube to line 5 with liquid.
NOTE: If additional extract is needed to fill the tube to line 5, repeat steps 1 through 4.

6  Add one Potassium Indicator Tablet (5708A) to soil extract in second tube.

7  Cap and mix until tablet dissolves. A purplish color will appear.

8  Add Potassium Test Solution (5709), two drops at a time, keeping count. Mix contents after each addition. Stop adding drops when the color changes from purplish to blue.

Potassium (Potash) Test, continued

9 Use Potassium End Point Color Chart (1352) as a guide in reading this color change. Keep an accurate count of the number of drops added. Read test result from table.

Number of Drops Added	Potassium (Potash) Level
0-8	Very High
10	High
12	Medium High
14	Medium
16	Medium Low
18	Low
20 or more	Very Low

Low	0-120 lbs/Acre
Medium	120-200 lbs/Acre
High	+200 lbs/Acre