**POTASSIUM (POTASH) TEST**

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

**STEP 2**
Use 0.5g spoon to add four dippers of soil sample to test tube.

**STEP 3**
Cap and shake vigorously for one minute.

**STEP 4**
Remove cap and allow soil to settle.
Use a clean pipet (0364) to transfer the clear liquid to another clean test tube. Be careful not to pull up any soil into pipet. Fill second tube to line 5 with liquid.

**STEP 5**
If additional extract is needed to fill the tube to line 5, repeat Steps 1 through 4.

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

**STEP 7**
Add Potassium Test Solution (5709), two drops at a time, keep count. Swirl test tube after each addition to mix contents. Stop adding drops when color changes from purplish to blue.

**STEP 8**
Use Potassium End Point Color Chart as a guide in reading this color change. Keep an accurate count of the number of drops added. Read test result from table.

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**QUANTITY** | **CONTENTS** | **CODE**
---|---|---
250 mL | pH Indicator Solution | 5701-K
250 mL | Nitrogen Extracting Solution | 5702-K
30 g | *Nitrogen Indicator* | *5703-G*
250 mL | *Phosphorus Extracting Solution* | *5704-K*
15 mL | *Phosphorus Indicator Solution* | *5705-E*
30 | *Phosphorus Test Tablets* | *5706-H*
250 mL | *Potassium Extracting Solution* | *5707-K*
30 | Potassium Indicator Tablets | 5708-H
2 x 15 mL | Potassium Test Solution | 5709-E
10 | Test Tubes, calibrated 1-8 mL | 0755
1 | Brush, test tube | 0514
3 | Pipets, transfer, plastic | 0364
1 | Spoon, measuring, 0.25 g | 0695
1 | Spoon, measuring, 0.5 g | 0698
1 | Color Chart, Nitrogen | 1325
1 | Color Chart, Phosphorus | 1372
1 | Color Chart, Potassium (End Point) | 1352
1 | Color Chart, Wide Range pH | 1353
1 | “Garden Guide Manual” | 500
1 | “Study of Soil Science” | 1530
1 | “LaMotte Soil Handbook” | 1504

*WARNING: Reagents marked with a * are considered hazardous substances. Read accompanying MSDS before use.*

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**GARDEN GUIDE • SOIL TEST KIT**

**MODEL EM**

**CODE 5934**

**LaMotte COMPANY**

PO BOX 329 • CHESTERTOWN • MARYLAND • 21620

800-344-3100 • 410-778-3100 (Outside U.S.A.)

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**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 after use.
4. Tighten reagent caps immediately after use. Do not interchange caps.
5. Avoid prolonged exposure to direct sunlight.
6. Avoid temperature extremes. Protect all test components from freezing.
7. Anticipate your requirements for replacement reagents.
8. Keep all reagent containers out of reach of young children.
9. Reagents marked with a * are considered hazardous substances. Read accompanying MSDS 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

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**NUMBER OF DROPS ADDED**

<table>
<thead>
<tr>
<th>Number of Drops Added</th>
<th>Potassium (Potash) Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>Very High</td>
</tr>
<tr>
<td>10</td>
<td>High</td>
</tr>
<tr>
<td>12</td>
<td>Medium High</td>
</tr>
<tr>
<td>14</td>
<td>Medium</td>
</tr>
<tr>
<td>16-18</td>
<td>Medium Low</td>
</tr>
<tr>
<td>18</td>
<td>Low</td>
</tr>
<tr>
<td>20 or more</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

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READING THE COLOR CHARTS

When matching a test color with a color chart stand with the light source behind the chart 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 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**

**STEP 1**
Fill test tube (0755) to line 4 with pH Indicator Solution (5701PT). Squeeze bottle gently to control amount dispensed.

**STEP 2**
Use 0.5g spoon (0698) to add three measures of soil sample.

**STEP 3**
Cap and shake gently for one minute.

**STEP 4**
Remove cap. Allow to stand and soil to settle until liquid above soil is clear.

**STEP 5**
Use a clean 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.

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

**STEP 7**
Cap and shake to mix contents.

**STEP 8**
Add one *Phosphorus Test Tablet (5706).

**STEP 9**
Cap and shake to dissolve tablet. A blue color will develop.

**STEP 10**
Match test color with Phosphorus Color Chart. Record as phosphorus.

**PHOSPHORUS TEST**

**STEP 1**
Fill test tube (0755) to line 6 with *Phosphorus Extracting Solution (5704).

**STEP 2**
Use 0.5g spoon (0698) to add three measures of soil sample.

**STEP 3**
Cap and gently shake for one minute.

**STEP 4**
Remove cap. Allow to stand and soil to settle until liquid above soil is clear.

**STEP 5**
Use a clean 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.

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

**STEP 7**
Cap and shake to mix contents.

**STEP 8**
Add one *Phosphorus Test Tablet (5706).

**STEP 9**
Cap and gently shake to dissolve tablet. A blue color will develop.

**STEP 10**
Match test color with Phosphorus Color Chart. Record as phosphorus.

**NITROGEN TEST**

**STEP 1**
Fill test tube (0755) to line 7 with Nitrogen Extracting Solution (5702).

**STEP 2**
Use 0.5g spoon to add two dippers of soil sample.

**STEP 3**
Cap and gently shake for one minute.

**STEP 4**
Remove and allow soil to settle.

**STEP 5**
Use a clean 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 with liquid.

**STEP 6**
Use 0.25 g spoon (0695) to add two dippers of *Nitrogen Indicator Powder (5703) to soil extract in second tube.

**STEP 7**
Cap and gently shake to mix. Wait 5 minutes for pink color to develop above the powder.

**STEP 8**
Match test color with Nitrogen Color Chart. Record as nitrogen.