



# Soil Test Kit Garden Guide

Model EL/EM • Code 5679/5934

Quantity (EL/EM)	Contents	Code
120 mL/250 mL	pH Indicator	5701
120 mL/250 mL	*Nitrogen Extracting Solution	*5702
10 g/30 g	*Nitrogen Indicator Powder	*5703
120 mL/250 mL	*Phosphorus Extracting Solution	*5704
15 mL/15 mL	*Phosphorus Indicator Reagent	*5705
25/50	*Phosphorus Test Tablets	*5706
120 mL/250 mL	Potassium Extracting Solution	5707
25/50	Potassium Indicator Tablets	5708
15 mL/2 x 15 mL	Potassium Test Solution	5709
7/10	Test Tubes, 1-8 mL, plastic w/ caps	0755
1/1	Brush, test tube	0514
3/3	Pipets, transfer, plastic	0364
1/1	Spoon, 0.25 g, plastic	0695
1/1	Spoon, 0.5 g, plastic	0698
1/1	Color Chart, Nitrogen	1371
1/1	Color Chart, Phosphorus	1372
1/1	Color Chart, Potassium, End Point	1352
1/1	Color Chart, pH, Wide Range	1353
1/1	Garden Guide Manual	500
1/1	Study of Soil Science	1530
1/1	LaMotte Soil Handbook	1504

*\*WARNING: Reagents marked with a \* are considered to be potential health hazards. To view or print a Material Safety Data Sheet (MSDS) for these reagents see MSDS CD or [www.lamotte.com](http://www.lamotte.com). To obtain a printed copy, contact LaMotte by email, phone or fax.*

*To order individual reagents or test kit components, use the specified code number.*

WARNING! This set contains chemicals that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision

## Proper handling of chemical test equipment

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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 on CD or at [www.lamotte.com](http://www.lamotte.com) before use.

## Read the Garden Guide Manual

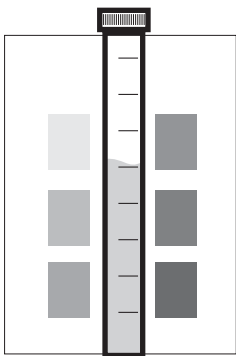
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The accompanying Garden Guide Manual provides:

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.

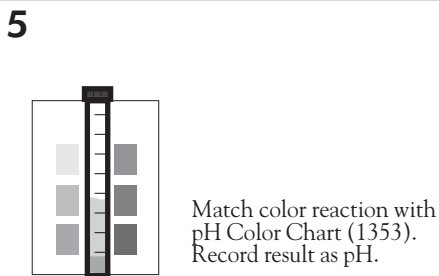
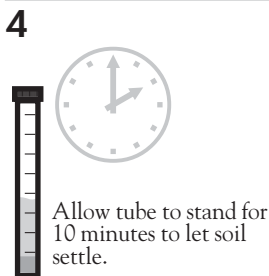
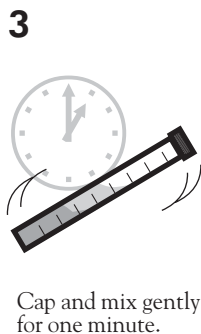
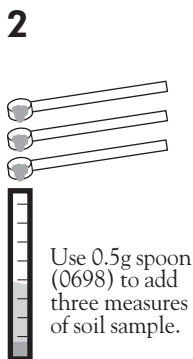
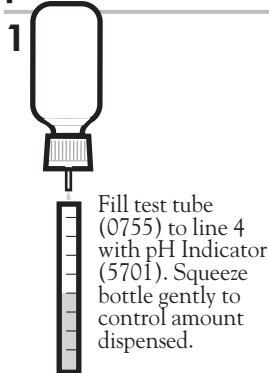
## Reading the Color Charts

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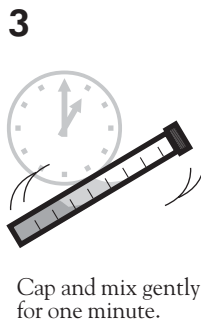
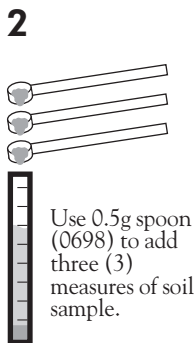
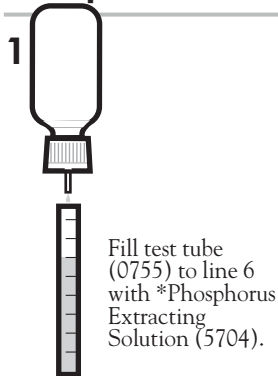


When matching a test color to a color chart, stand with the light source behind the observer and hold the test tube approximately one-half inch away from the color chart. If the color of a test reaction falls between two standard colors on a color chart, the mid-point between the two standard colors 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



## Phosphorus Test



## Phosphorus Test, continued

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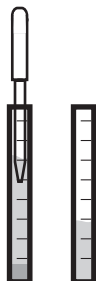
4



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.

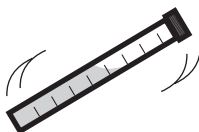
6



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



7



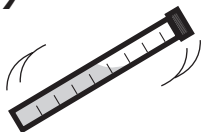
Cap and mix.

8



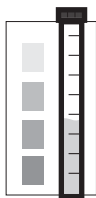
Add one  
\*Phosphorus Test  
Tablet (5706).

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

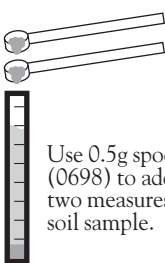
# Nitrogen Test

**1**



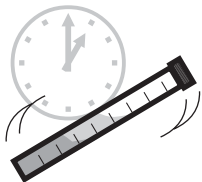
Fill test tube (0755) to line 7 with \*Nitrogen Extracting Solution (5702).

**2**




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

**3**



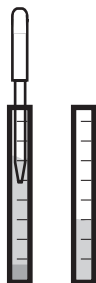
Cap and mix gently for one minute.

**4**



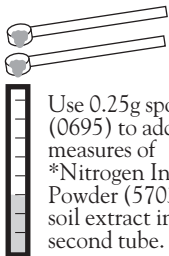
Remove cap and allow soil to settle.

**5**



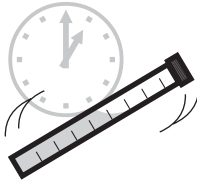
Use a clean pipet (0364) to transfer the clear liquid to a second test tube. To avoid agitation of soil, squeeze bulb of pipet before inserting tip into liquid. Release bulb slowly to draw clear liquid into pipet. Do not pull up any soil. Fill second tube to line 3 with liquid.

**6**



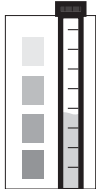
Use 0.25g spoon (0695) to add two measures of \*Nitrogen Indicator Powder (5703) to soil extract in second tube.

**7**



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


**10**

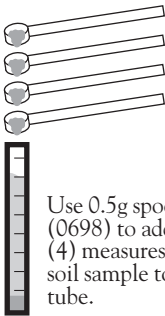


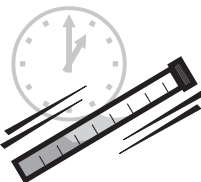
Match test color with Nitrogen Color Chart (1371). Record as Nitrogen.


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.

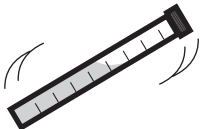
**3**  Cap and shake vigorously for one minute.


**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 (5708) to soil extract in second tube.

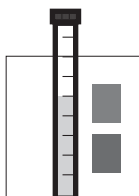
**7**  Cap and mix until tablet dissolves. A purplish color will appear.

**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

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- 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

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



LaMotte Company

PO Box 329 • Chestertown • Maryland • 21620 • USA  
800-344-3100 • 410-778-3100 (outside USA) • Fax 410-778-6394  
Visit us on the web at [www.lamotte.com](http://www.lamotte.com)