



LaMOTTE-MORGAN SOIL pH TEST KIT

MODEL ST-M • CODE 5023

QUANTITY	CONTENTS	CODE
60 mL	*Duplex Indicator	*2221-H
60 mL	Bromcresol Green Indicator	2207-H
60 mL	Chlorophenol Red Indicator	2209-H
60 mL	Bromthymol Blue Indicator	2210-H
60 mL	Phenol Red Indicator	2211-H
120 mL	Distilled Water	5115PT-J
2	Double Spot Plates, plastic	0159
1	Rod, plastic	0520
1	Color Chart, Soil Duplex	1313
1	Color Chart, Bromcresol Green	1328
1	Color Chart, Chlorophenol Red	1329
1	Color Chart, Bromthymol Blue	1331
1	Color Chart, Phenol Red	1332
1	<i>LaMotte Soil Handbook</i>	1504

***WARNING:** Reagents marked with an * are considered to be potential health hazards. To view or print a Material Safety Data Sheet (MSDS) for these reagents go to www.lamotte.com. To obtain a printed copy, contact LaMotte by e-mail, phone or fax.

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

PROCEDURE

1. Fill one of the large depressions in a spot plate (0159) with sample soil. Do not pack the soil down.
2. Place spot plate on a level surface. Add *Duplex Indicator (2221) drop by drop until the soil is thoroughly saturated. Do not overfill. If sample is flooded, some indicators will not react completely with soil, producing a false reading. Wait 3 minutes.
3. Tilt the spot plate so that indicator flows down channel and collects in smaller depression. If necessary, use the pointed plastic rod to start the flow.
4. Match color in small depression plate to a color standard on the Duplex Color Chart (1313).
5. Use result from Step 4 to choose a narrow range indicator for more precise pH measurements. Use chart below to determine the proper narrow range. Choose the indicator with the midpoint closest to sample pH.
6. Using a second portion of soil and the narrow range indicator, repeat Steps 1-5 in a clean depression. Consult Chapter Four of the *LaMotte Soil Handbook* (1504) for interpretation of the narrow range pH test result.

Indicator	Range	Midpoint Value
Bromcresol Green (2207)	3.8 – 5.4	4.6
Chlorophenol Red (2209)	5.2 – 6.8	6.0
Bromthymol Blue (2210)	6.0 – 7.6	6.8
Phenol Red (2211)	6.8 – 8.4	7.6

NOTES & PRECAUTIONS

1. Do not conduct tests in a closed stable in the presence of fumes from decomposing manure, or in a laboratory where ammonia or acid fumes are present.
2. Compare colors in diffused daylight. Comparison of colors in direct sunlight or artificial light may result in incorrect readings.
3. Wash spot plate with Distilled Water (5115PT) prior to testing, particularly when alkaline soils are to be tested. A change of color as liquid passes down the channel indicates that impurities on the plate have interfered in the test reaction.
4. Avoid contact between soil sample and hands, fertilizers, sprays, etc. See the *LaMotte Soil Handbook* for a detailed discussion of collection, preparation, and handling of soil samples.
5. Some soils may be more acid than pH 3.8; others may be more alkaline than pH 8.4. LaMotte Company furnishes narrow range indicators and color charts to measure these extreme ranges: Bromphenol Blue, pH 3.0 - 4.6; Thymol Blue, pH 8.0 - 9.6.

LaMOTTE COMPANY

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