



## POTASSIUM MODULE

FOR SOIL MACRONUTRIENTS KIT • CODE 5928-01

TURBIDITY TUBE, 100 - 400 Ibla

CODE 5932-01

QUANTITY	CONTENTS	CODE
120 mL	*Universal Extracting Solution	*5173PT-J
120 mL	*Universal Extracting Solution	*5173PS-J
50	*Potassium Reagent B Tablets	*5161-H
120 mL	*Potassium Reagent C	*5162-J
1	Test Tube, Potash "B"	0246
4	Test Tubes, 1-8 mL, plastic, w/cap	0755
1	Funnel, plastic	0459
1	Filter Paper, 50 pk	0465-H
1	Pipet, plastic	0364
1	Spoon, 0.5 g	0698
1	Potash Reading Plate	1107
1	Test Tube, filtrate, plastic	0749
1	Dispenser Cap	0692

\*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](http://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. For a discussion of the importance of potassium, see A Study of Soil Science (Code 1530) by Dr. Henry D. Foth.

NOTE: It is important the temperature of the test sample and the \*Potassium Reagent C be kept between of 20-27°C (68-80°F) during the test, in order to ensure complete precipitation of the potassium. On warm days the vial containing the test solution to which the \*Potassium Reagent B Tablet has been added and the \*Potassium Reagent C should be cooled by placing them in cool water before mixing.

Place dispenser cap (0692) on \*Potassium Reagent C (5162). Save this cap for refill reagents.

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

## PROCEDURE

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1. Fill a test tube (0755) to line 7 with \*Universal Extracting Solution (5173).
2. Use the 0.5 g spoon (0698) to add four level measures of soil. Cap tube and shake for one minute.

**NOTE:** When adding samples with high concentrations of carbonates to \*Universal Extracting Solution (5173), swirl tube to mix for 30 seconds before capping to allow gases to escape.

3. Fold a piece of filter paper (0465) in half. Fold in half again. Gently push corners together to form a cone. Place cone in funnel (0459).
4. Place funnel in clean filtrate tube (0749) and filter suspension through the filter paper. The clear solution is the extract used in the test.
5. Fill a clean test tube (0755) to line 3 with soil extract.
6. Add one \*Potassium Reagent B Tablet (5161). Cap and shake until tablet disintegrates.
7. Add \*Potassium Reagent C (5162) to line 7. Allow it to run slowly down the side of the tube. Cap and mix gently. A precipitate will form if potassium is present.
8. Place a Potash Tube “B” (0246) on the Potash Reading Plate (1107) directly over the black line.

**NOTE:** Face a window or some other source of daylight.

9. Use a pipet (0364) to add the treated test sample to Tube “B” allowing it to run down the sides of the tube while observing the black line through the solution. Continue until the line just disappears.
10. The height of the column of test sample is measured against the potassium scale on the tube. Record as pounds per acre potassium.

**NOTE:** For extremely high readings, dilute the filtered extract and retest. Add the soil sample filtrate to line 3 of a clean test tube (0755). Dilute to line 6 with \*Universal Extracting Solution (5173). Test following the procedure beginning with Step 5. Multiply final reading by 2.

**PRECAUTION:** Large amounts of ammonium salts will produce a precipitate similar to that obtained with potassium. If fertilizer containing ammonium salts has recently been added to the soil, or if the soil pH is low (pH 4.0-5.0), a test should be made for ammonium compounds. Equivalent quantities of ammonium salts will produce about one-fourth as much precipitate as obtained from potassium salts.

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