



TOTAL DISSOLVED SOLIDS (TDS) KIT

DIRECT READING TITRATOR, 0-1000 ppm

CODE 4801-DR-01

QUANTITY	CONTENTS	CODE
60 mL	*TDS Reagent A	*4802DR-H
60 mL	*TDS Reagent B	*4803DR-H
15 mL	*Methyl Orange Indicator, 0.1% w/Halidex	*2299-E
2	Direct Reading Titrators, 0-1000 Range	0384
2	Test Tubes, 5-10-15 mL, glass, w/caps	0778
1	Pipet, 1.0 mL, plastic	0354
60 mL	Demineralizer Bottle	1151
2	Resin Columns	1079

*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.

Read the LaMotte Direct Reading Titrator Manual before proceeding. The Titrator is calibrated in terms of Total Dissolved Solids (TDS) expressed as parts per million calcium carbonate (CaCO_3). Each minor division on the Titrator scale equals 20 ppm.

Two identical Direct Reading Titrators are furnished in this kit. Use one Titrator to dispense TDS Reagent A; use the second to dispense TDS Reagent B. Do not interchange the Titrators.

The Demineralizer Bottle is the source of all the demineralized water used in this test. Read the instruction sheet before proceeding.

CARE OF THE RESIN COLUMN

At the conclusion of each test, treat the resin column with demineralized water as described in Step 6. Stopper and cap the moist column between uses.

PROCEDURE

PART A

1. Fill a test tube (0778) to 10 mL line with sample water.
2. Add 3 drops *Methyl Orange Indicator, 0.1% w/Halidex (2299). Cap and mix. Solution will turn yellow.
3. Fill a Direct Reading Titrator (0384) with *TDS Reagent A (4802DR). Insert Titrator into the center hole of the test tube cap.
4. While gently swirling the test tube, slowly press the Titrator plunger to dispense *TDS Reagent A until the yellow color changes to pink. Read the test result directly from the scale where the large ring on the Titrator meets the Titrator barrel. Record as Result A. Discard the test sample and any TDS Reagent A remaining in the Titrator.

PART B

In the second part of the TDS test, the sample water is passed through an ion exchange column, which exchanges the various cations (Na, Ca, Mg, etc.) for hydrogen ions, which are then titrated with *TDS Reagent B. Two ready-to-use resin columns are furnished in this kit. Each column may be used for twenty water samples before being discarded. Keep a record of the number of times a column is used.

5. Suspend a resin column (1079) in the second test tube (0778) by inserting the tip of the column into the center hole of the test tube cap.
6. Add a small amount of Demineralized Water (3 or 4 mL) to the resin column.
7. Use the 1.0 mL pipet (0354) to add 5 mL of sample water to the column.
8. When all of this water has passed through the column, remove the cap and discard the solution collected in the tube.
9. Replace the cap and the resin column and continue adding sample water to the column, using the pipet, until exactly 10 mL has been collected in the test tube. Remove the cap and column.
10. Add 3 drops of *Methyl Orange Indicator, 0.1% w/Halidex (2299). Cap and mix. Solution will turn red.
11. Fill the second Titrator with *TDS Reagent B (4803DR). Titrate the sample until the red color changes to yellow. Read the test result directly from the scale where the large ring on the Titrator meets the Titrator barrel. Record as Result B.
12. Add Result A and Result B. Record as ppm total dissolved solids as CaCO_3 .

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PO Box 329 • Chestertown • Maryland • 21620 • USA
800-344-3100 • 410-778-3100 (Outside U.S.A.) • Fax 410-778-6394

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