



## PHOSPHONATE KIT

### DIRECT READING TITRATOR - CAS METHOD

CODE 7625-DR-01

QUANTITY	CONTENTS	CODE
15 mL	Sodium Thiosulfate, 0.1N	6155-E
15 mL	*Hydrochloric Acid, 0.1N	*6323-E
15 mL	*Hydrochloric Acid, 1.0N	*6130-E
15 mL	Chrome Azurol S Indicator	3964-E
60 mL	Thorium Nitrate Reagent, 0.00132M	3965-H
1	Dispenser Cap	0601
1	Test Tube, 5-10-12.9-15-20-25 mL, glass, w/cap	0608
1	Direct Reading Titrator, 0-20 Range	0378

\*WARNING: Reagents marked with an \* are considered to be potential health hazards. To view or print a Safety Data Sheet (SDS) for these reagents go to [www.lamotte.com](http://www.lamotte.com). Search for the four digit reagent code number listed on the reagent label, in the contents list or in the test procedures. Omit any letter that follows or precedes the four digit code number. For example, if the code is 4450WT-H, search 4450. To obtain a printed copy, contact LaMotte by email, phone or fax.

Emergency information for all LaMotte reagents is available from Chem-Tel: (US, 1-800-255-3924) (International, call collect, 813-248-0585).

To order individual reagents or test kit components, use the specified code number. Carefully read the instruction manual for the Direct Reading Titrator before performing the titration procedure described below. The titrator is calibrated in terms of parts per million Phosphonate, and each minor division on the titrator scale equals 0.4 ppm.

### **PROCEDURE**

1. Fill the test tube (0608) to the 10 mL line with the sample water.
2. Add 1 drop of Sodium Thiosulfate (6155).
3. Add 5 drops of Chrome Azurol S Indicator (3964). Swirl to mix.
4. Add \*Hydrochloric Acid, 0.1N (6323) one drop at a time, swirling the tube after each drop to mix, until the color of the solution changes from yellow, through orange, to pinkish (pH 4-5). If, after adding 20 drops, the solution has not changed to pink, begin adding the \*Hydrochloric Acid, 1.0N (6130) one drop at a time, until solution changes to pink. Cap the test tube.
5. Replace the regular cap on the bottle of Thorium Nitrate Reagent (3965) with the special dispenser cap (0601). Fill the Direct Reading Titrator (0378) with the Thorium Nitrate Reagent (3965). Insert the Titrator into the center hole of the test tube cap.

6. While gently swirling the test tube, slowly press the plunger to titrate until the solution changes from pink to purple.
7. Read the test result directly from the scale where the large ring on the titrator meets the titrator barrel. Read result as ppm Phosphonate.
8. Replace the regular cap on the Thorium Nitrate Reagent (3965) bottle for storage.

NOTE: For most accurate results, the test procedure should be run on a blank sample of phosphonate-free water. This result should be subtracted from the reading obtained in step 7 above.

## **PHOSPHONATE CONVERSIONS**

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The titrator values will have to be multiplied by a conversion factor to provide accurate results. The following chart may be useful in determining conversion factors.

<b>Phosphonate</b>	<b>Compound Name</b>	<b>Factor</b>
Dequest 2000	AMP(NTP)	1.5
Dequest 2006	NaAMP	1.9
Dequest 2010	HEDP(A)	1.25
Bayhibit AM	PBTC	1.4
Belcor 575	HPA	1.0
Belsperse 161	PCA	2.3

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