# PHOSPHATE–HIGH RANGE

## VANADOMOLYBDOPHOSPHORIC ACID METHOD
## CODE 3655-SC

| QUANTITY | CONTENTS | CODE |
|---|---|---|
| 2 x 30 mL | *VM Phosphate Reagent | *4410-G |
| 1 | Pipet, 1.0 mL, plastic | 0354 |

*WARNING: Reagents marked with an * are considered hazardous substances. To view or print a Material Safety Data Sheet (MSDS) for these reagents see MSDS CD or our web site. To obtain a printed copy, contact us by e-mail, phone or fax.

Phosphate treatments in boiler and cooling water and other industrial water systems are run at levels up to 100 ppm orthophosphate. These high levels permit the use of a simpler, high range test.

**APPLICATION:** Boiler, cooling, and industrial water.

**RANGE:** 0.0–70.0 ppm Phosphate

**METHOD:** Orthophosphate reacts in acid conditions with ammonium vanadomolybdate to form vanadomolybdophosphoric acid. This yellow color is proportional to the concentration of orthophosphate and is read colorimetrically.

**SAMPLE HANDLING & PRESERVATION:** If the analysis cannot be performed the same day of collection, the sample should be preserved by the addition of 2 mL of concentrated sulfuric acid or 40 mg mercuric chloride per liter and refrigerated at 4°C.

**INTERFERENCES:** Silica interferes only if the sample is heated. Arsenate, fluoride, thorium, bismuth, sulfide, thiosulfate, and thiocyanate cause negative interference.

## PROCEDURE

1. Press and hold **ON** button until colorimeter turns on.
2. Press **ENTER** to start.
3. Press **ENTER** to select TESTING MENU.
4. Select ALL TESTS (or another sequence containing 79 Phosphate H) from TESTING MENU.
5. Scroll to and select 79 Phosphate H from menu.
6. Rinse a clean tube (0290) with sample water. Fill to the 10 mL line with sample.
7. Insert tube into chamber, close lid and select SCAN BLANK.
8. Remove tube from colorimeter. Use the 1.0 mL pipet (0354) to add 2.0 mL of *VM Phosphate Reagent (4410). Cap and mix. Wait 5 minutes for full color development.
9. After 5 minute waiting period, mix, insert tube into chamber, close lid and select SCAN SAMPLE. Record result.
10. Press **OFF** button to turn colorimeter off or press **EXIT** button to exit to a previous menu or make another menu selection.