

## Standard Operating Procedure (SOP) 3.3.3.1

### PHOSPHATE

Phosphate is a required macro-nutrient for green plants. It is often a limited resource especially in fresh water systems. When naturally occurring levels become elevated algal blooms can occur which may lead to oxygen depletion and to fish kills.

#### **Phosphate in Water Test Kit-Low Range Method Based on the La Motte Kit**

This test is based on the ascorbic acid reduction method that will give results for orthophosphate. Orthophosphate is a form of phosphate readily taken up by plants.

- 1) Fill test tube (0834) to mark with sample water.
- 2) Use 1.ml pipette (0354) to add 1.0ml of Phosphate Reducing Agent (V-6282). Cap and Mix
- 3) Use 0.1g spoon (0699) to add one level measure of Phosphate Reducing Reagent (V-6283). Cap and mix until dissolved. Wait 5 minutes.
- 4) Remove stopper from the test tube. Place tube in phosphate Comparator (3122) with Axial Reader (2071). Match sample color to a color standard. Record as ppm Orthophosphate. A colorimeter can also be used to read the result.

Tip: This test should be run on clear samples only. It may be necessary to filter a sample before running this test.

Warning: This method uses reagents (sulfuric acid, isoascorbic acid) that are considered hazardous substances. Read and follow all information contained on the label and Material Safety Data Sheet (MSDS).

See “Measuring Nitrogen” (SOP 3.3.2.1) for procedures on handling samples and general measurement techniques. A colorimeter may also be used on phosphate samples for improved accuracy.