

SLIDE & MIDGET COMPARATOR TESTS

ORTHOPHOSPHATES & POLYPHOSPHATES IN GENERAL

This method is based on the formation of phosphomolybdic acid, which is subsequently reduced with stannous chloride to produce a blue color whose intensity is proportional to the phosphate (PO_4^{3-}) present. Interferences are reduced to a minimum. The presence of 10,000 ppm of silica, 100 ppm of ferrous or ferric iron, or 1000 ppm of sulfite causes no error.

The water to be tested must be carefully filtered with a good grade of filter paper to free it from sludge and scale. Mere traces of sludge will cause serious errors.

If repeated filtration does not clarify the water, add 0.5 g potassium nitrate crystals to 25 mL of the sample water, heat to boiling, cool, dilute to 25 mL with distilled water, and filter.

If the water is very highly colored by tannin or other highly colored organic matter, so that a phosphate determination is difficult or impossible, it can be effectively decolorized with activated charcoal. Add half a teaspoon of activated charcoal to a pint container of the colored sample water. Close the container and shake sample well. Decolorization should take place in 5 to 15 minutes. The treated sample is then filtered as instructed above. From this point on follow the procedure outlined in the Orthophosphate or Polyphosphate tests.

