Iron II and III Reagent Set (300 tests) – HI96777-03

Description

Surface water typically contains up to 0.7 mg/L of iron. Drinking water typically contains up to 0.3 mg/L of iron, but this level may increase significantly if plumbing fixtures contain iron. In well-oxygenated, non-acidic waters, iron exists mainly in the ferric form (Fe^{3+}) and will precipitate as iron oxide hydroxide (FeO(OH)). However, anoxic water may have high levels of dissolved ferrous iron (Fe^{2+}), which could precipitate in heating/cooling systems or other equipment after exposure to air. The Iron (II)/(III) method can be used to distinguish between the ferrous (Fe^{2+}) and ferric (Fe^{3+}) forms of iron in a 2-step measurement process.

The HI96777-03 are high quality reagents that are pre-measured, allowing for users to achieve fast and accurate colorimetric measurements. These reagents use an adaptation of Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 3500-Fe B, Phenanthroline Method. During the first measurement, ferrous iron (Fe^{2+}) reacts with 1,10-phenanthroline to form an orange-red complex. During the second measurement, ferric iron (Fe^{3+}) is converted to ferrous iron (Fe^{2+}) by the addition of Reagent B; the resulting measurement is the sum of ferrous (Fe^{2+}) and ferric (Fe^{3+}) iron.