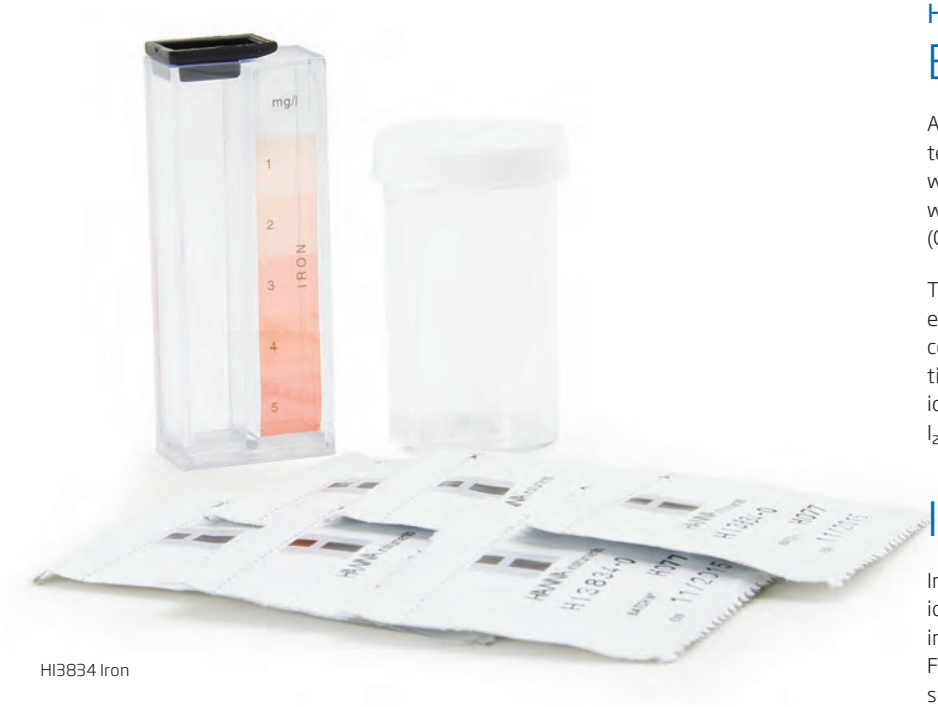

HI3834 Iron

HI3843

Bleach Test Kit

An iodometric titration method is used in this test kit. The hypochlorite solution is treated with potassium iodide and strongly acidified with acid:

$(OCl)^- + 2H^+ + 2I^- \rightarrow Cl^- + I_2 + H_2O$

The amount of iodine generated is equivalent to the chlorine in the sample. The concentration of iodine is then calculated by titration of thiosulfate ions that reduce the iodine back to iodide ions:

$I_2 + 2(S_2O_3)^{2-} \rightarrow 2I^- + (S_4O_6)^{2-}$

Iron Test Kits

Iron can exist as ferrous (Fe^{2+}) or ferric (Fe^{3+}) ions. The Hanna test kit determines total iron levels in water via a colorimetric method. First, all ferric ions are reduced by sodium sulfite to ferrous ions. Phenanthroline complexes with ferrous ion to form an orange-colored solution. The color intensity of the solution determines the iron concentration.

HI3834
Medium Range with Color Cube

HI38039
Low Range with Checker® Disc

HI38040
Medium Range with Checker® Disc

HI38041
High Range with Checker® Disc

Method	Range	Smallest Increment	Chemical Method	# Tests
HI3843	**Hypochlorite (as Cl_2)**			
titration	50-150 g/L (ppt)	5 g/L (ppt)	iodometric	100 avg.
HI3834	**Iron (Fe^{2+} & Fe^{3+})**			
colorimetric	0-5 mg/L (ppm)	1 mg/L (ppm)	phenanthroline	50
HI38039	**Iron (Fe^{2+} & Fe^{3+})**			
checker disc	0.00-1.00 mg/L (ppm)	0.02 mg/L (ppm)	phenanthroline	100
HI38040	**Iron (Fe^{2+} & Fe^{3+})**			
checker disc	0.0-5.0 mg/L (ppm)	0.1 mg/L (ppm)	phenanthroline	100
HI38041	**Iron (Fe^{2+} & Fe^{3+})**			
checker disc	0.0-10.0 mg/L (ppm)	0.2 mg/L (ppm)	phenanthroline	100

Ordering Information

HI3843 test kit comes with 30 mL potassium iodide solution, 100 packets bleach reagent B, 60 mL bleach reagent C (2), 125 mL glass Erlenmeyer flask and 1 mL plastic pipettes (25).

HI3834 test kit comes with 50 packets iron reagent, color comparison cube and 20 mL plastic vessel.

HI38039 and **HI38040** test kits come with 100 packets iron reagent, checker disc, glass vials with caps (2) and 3 mL plastic pipette.

HI38041 test kit comes with 100 packets iron reagent, 500 mL deionized water, checker disc, glass vials with caps (2), 3 mL plastic pipettes and long plastic pipette.

See a list of chemical test kit reagents beginning on page 1.52