

COLOR COMPARISON TEST FERRIC, FERROUS & TOTAL IRON (0-10 ppm)

COMPONENTS:

1 x 3243	Cap, Test Cell (11.5 mL), plastic
1 x 4024	Test Cell, Calibrated (11.5 mL), plastic
1 x 4029	Pipet, Calibrated (0.5 & 1.0 mL), plastic
3 x 4030	Pipet, Calibrated (0.5 & 1.0 mL) w/ cap, plastic
1 x 5126	Instruction
1 x 6002	Brush, Test Cell
1 x 9050	Midget Comparator, Iron (ferric/ferrous/total), Phenanthroline, 0-10 ppm
1 x 9198	Sample Tube, Graduated (25 mL) w/ cap, plastic
1 x R-0616-C	Hydrochloric Acid Concentrated*, 2 oz
1 x R-0852-C	Iron Reagent #2, 2 oz
1 x R-1306E-C	Hydroxylamine Reagent**, 2 oz
1 x R-1306G-C	Phenanthroline Reagent, 2 oz

**TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE
800-TEST KIT (800-837-8548).**

PROCEDURE:

**CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS.
KEEP REAGENTS AWAY FROM CHILDREN.**

Ferrous Iron Test

1. Rinse and fill 25 mL sample tube (#9198) to 10 mL mark with water to be tested.
2. Using 1.0 mL pipet (#4029), add 8 drops R-0616 Hydrochloric Acid Concentrated. Swirl to mix.
3. Using a separate 1.0 mL pipet (#4030), add 2.0 mL (2 x 1.0 mL) R-0852 Iron Reagent #2. Swirl to mix.
4. Using a separate 1.0 mL pipet (#4030), add 2.0 mL (2 x 1.0 mL) R-1306G Phenanthroline Reagent. Swirl to mix. WAIT 15 MINUTES. Transfer to 11.5 mL test cell (#4024) to 11.5 mL mark.
5. Wipe dry and place in comparator WITH FROSTED SIDE FACING OPERATOR.
6. Match color in test cell with a color standard. Record as parts per million (ppm) ferrous iron (Fe^{+2}).

Total Iron Test

1. Rinse and fill 25 mL sample tube (#9198) to 10 mL mark with water to be tested.
2. Using 1.0 mL pipet (#4029), add 8 drops R-0616 Hydrochloric Acid Concentrated. Swirl to mix.

NOTE: If suspended iron is difficult to dissolve: Transfer to small beaker or flask. Heat and boil gently. Remove from heat. Cool to room temperature. Transfer to sample tube. Dilute to 10 mL mark with distilled, deionized, or iron-free water. Proceed to Step 3.

3. Using a 1.0 mL pipet (#4030), add 4 drops R-1306E Hydroxylamine Reagent. Swirl to mix.
4. Using a separate 1.0 mL pipet (#4030), add 2.0 mL (2 x 1.0 mL) R-0852 Iron Reagent #2. Swirl to mix.
5. Using a separate 1.0 mL pipet (#4030), add 2.0 mL (2 x 1.0 mL) R-1306G Phenanthroline Reagent. Swirl to mix. WAIT 15 MINUTES. Transfer to 11.5 mL test cell (#4024) to 11.5 mL mark.
6. Wipe dry and place in comparator WITH FROSTED SIDE FACING OPERATOR.
7. Match color in test cell with a color standard. Record as parts per million (ppm) total iron (Fe).

Ferric Iron Test

1. Subtract ferrous iron from total iron. Record as parts per million (ppm) ferric iron (Fe^{+3}).
Formula: Total Iron – Ferrous Iron = Ferric Iron.

*WARNING: Hydrochloric Acid Concentrated (R-0616) contains 30-40% w/w hydrochloric acid, a corrosive acid.

**WARNING: Hydroxylamine Reagent (R-1306E) contains 5-10% w/w hydroxylamine hydrochloride, a corrosive acid.



31 Loveton Circle, Sparks, MD 21152 USA
800-TEST KIT (837-8548) • 410-472-4340