Iron in Brine CHEMets® Kit

K-6002/R-6002: 0 - 100 & 100 - 1000 mg/L

Test Procedure

1. Using one of the syringes provided, obtain 0.5 mL of the sample to be tested, and then dispense it into the empty **50 mL sample cup**.

   NOTE: For best sampling accuracy, draw more than 0.5 mL of sample into the syringe, point the syringe tip upward and depress the plunger while tapping the syringe barrel. This will cause any bubbles trapped in the sample to be released. Then depress the syringe to the 0.5 mL mark and touch the tip to a surface to remove any excess sample. Dispense the 0.5 mL sample into the sample cup.

2. Using the other syringe provided, obtain 1.0 mL of A-6001 Acidifier Solution and then dispense it into the 50 mL sample cup.

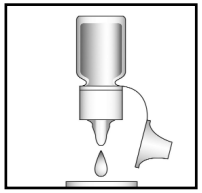

Figure 1

3. Add 5 drops of A-6002 Activator Solution (fig. 1).
4. Swirl the cup briefly, then wait **2 minutes**.
5. Dilute the contents of the sample cup to the **50 mL mark with distilled water**. Cap the cup and shake it to mix the contents well.
6. Place the CHEMet ampoule, tip first, into the sample cup. Snap the tip. The ampoule will fill leaving a bubble for mixing (fig. 2).

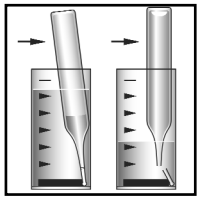

Figure 2

7. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.
8. Dry the ampoule. Obtain a test result **within 1 minute** after snapping the tip.
9. Obtain a test result using the appropriate comparator.
   a. **Low Range Comparator (fig. 3):** Place the ampoule, flat end first, into the comparator. Hold the comparator up toward a source of light and view from the bottom. Rotate the comparator until the best color match is found.

Figure 3

   b. **High Range Comparator (fig. 4):** Place the ampoule between the color standards until the best color match is found.

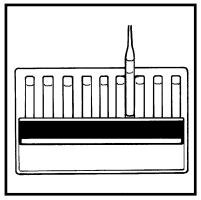

Figure 4

Test Method

The Iron In Brine CHEMets®[1] test method employs the ferric thiocyanate chemistry.[2] In an acidic solution, hydrogen peroxide oxidizes ferrous iron. The resulting ferric iron reacts with ammonium thiocyanate to form ferric thiocyanate, a red-orange colored complex, in direct proportion to the iron concentration. The method reports total iron. By dividing the test result by the density of the brine expressed in units of kg/L, the test result is converted to mg/kg.

1. CHEMets is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 3,634,038
2. D. F. Boltz and J.A. Howell, eds., Colorimetric Determination of Nonmetals, 2nd ed., Vol. 8 p. 304 (1978).

Safety Information

Read SDS (available at www.chemetrics.com) before performing this test procedure. Wear safety glasses and protective gloves.

Visit www.chemetrics.com to view product demonstration videos.
Always follow the test procedure above to perform a test.

CHEMetrics
Simplicity in Water Analysis

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