Silica Kit

K-9011/R-9011 ULR CHEMets® Kit

0 - 0.20 ppm

K-9010/R-9010 CHEMets® Kit

0 - 1 & 1 - 10 ppm

Test Procedure

1. Fill the sample cup to the 15 mL mark with the sample to be tested (fig. 1).
2. Add 10 drops of A-9001 Activator Solution (fig 2). Cap the sample cup and shake it to mix the contents well.
3. Wait **4 minutes**.
4. Add 5 drops of A-9000 Neutralizer Solution (fig. 2). Cap the cup and shake it to mix the contents well.
5. Wait **1 minute**.
6. Place the CHEMet ampoule, tip first, into the sample cup. Snap the tip. The ampoule will fill leaving a bubble for mixing (fig. 3).
7. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end. Dry the ampoule.
8. **For K-9011:** Obtain a test result **4 minutes** after snapping the tip.
   For K-9010: Obtain a test result **2 minutes** after snapping the tip.
9. Obtain a test result using the appropriate comparator (K-9011 has only one comparator).
   a. **Low Range Comparator (fig. 4):** 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.

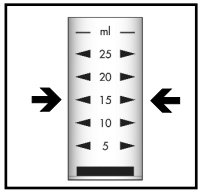

Figure 1

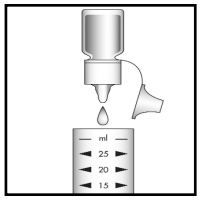

Figure 2

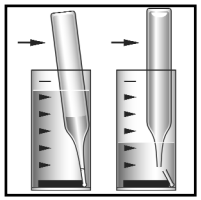
Figure 3


Figure 4

   b. **High Range Comparator (fig. 5):** Place the ampoule between the color standards until the best color match is found.

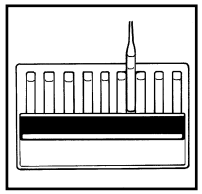
Figure 5

Test Method

The Silica CHEMets® & ULR CHEMets®[1] test method employs the heteropoly blue chemistry.[2,3,4] Silica reacts with ammonium molybdate at a pH of 1.2 to form molybdosilicic acid, which is then reduced by aminonaphtholsulfonic acid to form heteropoly blue. The resulting blue color is directly proportional to the silica concentration in the sample. Interferences from phosphate (up to 60 ppm) are masked by the addition of A-9000 Neutralizer Solution (citric acid). This method determines "molybdate reactive" silica.

1. CHEMets & ULR CHEMets are registered trademarks of CHEMetrics, LLC U.S. Patent No. 3,634,038
2. APHA Standard Methods, 23rd ed., Method 4500-SiO_2 D - 1997
3. EPA Methods for Chemical Analysis of Water and Wastes, Method 370.1 (1983)
4. ASTM D859-05, Silica in Water

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.

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