

# Carbohydrazide CHEMets® Kit

**K-1805/R-3902:** 0 - 0.50 ppm

**Note:** For safety and to prevent flashing (which concentrates the sample), samples must be cooled to 25°C (77°F) by collecting through a sample cooler. If the sample is colored or turbid, filter it before running this test.

## Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig. 1).
2. Add 2 drops of S-1800 Activator Solution (fig. 2). Stir to mix the contents of the cup.
3. Wait **5 minutes**.
4. Place the CHEMet ampoule, tip first, into the sample cup. Snap the tip. The ampoule will fill leaving a bubble for mixing (fig. 3).
5. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.
6. Dry the ampoule. Obtain a test result **1 minute** after snapping the tip.
7. Obtain a test result by placing 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. (fig. 4)

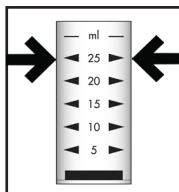


Figure 1

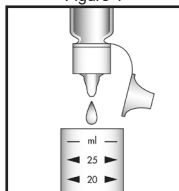


Figure 2

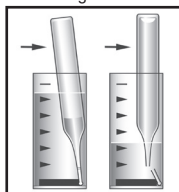


Figure 3



Figure 4

## Test Method

The Carbohydrazide CHEMets®<sup>1</sup> test kit employs the PDTS chemistry<sup>2</sup>. The sample is treated with an excess of ferric iron. Carbohydrazide reacts quantitatively with ferric iron by reducing it to the ferrous state. The resulting ferrous iron then reacts with PDTS (3-(2-pyridyl)-5,6-bis(4-phenylsulfonic acid)-1,2,4-triazine disodium salt) to form a peach-pink colored complex in direct proportion to the carbohydrazide concentration.

1. CHEMets is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent No. 3,634,038
2. G. Frederick Smith Chemical Co., *The Iron Reagents*, 3rd ed., p. 47 (1980).

## Safety Information

Read SDS before performing this test procedure. Wear safety glasses and protective gloves.

