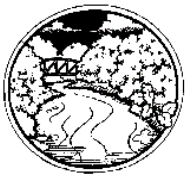


How to use…

Ferrous Iron Kit (Hach Model IR-18C)

INSTRUCTION SHEET

Testing Location – Field or Laboratory

Refrigerate the sample if not completely immediately. It is best to conduct the test within 24 hours of collecting the water.

Materials

Ferrous Iron Reagent Powder Pillows
2 plastic test tubes
black color comparator box with orange shaded color disk
1 plastic 25 mL measuring vial
clippers or scissors

Testing Background

This test is an optional test for classes participating in the project. In this test, the 1,10 phenanthroline indicator in the Ferrous Iron Reagent reacts with the ferrous iron in the sample to form an orange color in proportion to the ferrous iron concentration.

Testing Instructions

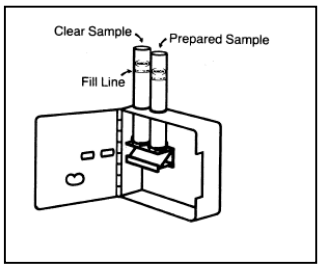
1. Fill the plastic measuring vial, not test tube, to the 25 mL mark with sample water.

2. Add the contents of one Ferrous Iron Reagent Powder Pillow to the measuring vial. Swirl, not shake, to mix. Allow three minutes to pass for full color development. An orange color will appear if ferrous iron is present. While waiting, proceed to step 3.

3. Fill a clean test tube to the bottom (5 mL) line with sample water. Place this tube in the outermost opening in the black color comparator box (make sure the orange color disk is in).

4. After 3 minutes, fill another test tube with the prepared sample (possibly orange in color) to the bottom (5 mL) line. Place this tube in the centermost opening in the comparator box.

5. Hold the comparator up to a light source (sky, window, or lamp). Look through the openings on the front and rotate disk until the color matches in the two openings. *Note: BOTH test tubes either have to be capped or uncapped, not one capped and one uncapped.* Read the numerical value through the slit on the front. This is the amount of ferrous iron (mg/L) in the sample. Record this value on the data sheet. If there was no orange color and you are sure you have followed the instructions correctly, it can be concluded that there was either no ferrous iron present or the amount was too small to be detected with this test kit.



Disposal and Clean Up

The waste from this test should be collected in a waste container to take back to the classroom. Once there, it can be flushed down the sink with plenty of water. Clean all equipment thoroughly with distilled water

Safety Precautions

The chemical in this kit may be hazardous to the health and safety of the user if inappropriately handled. Please read the warning on the package before performing the test. Use appropriate safety equipment and normal precautions.

Test instructions adapted from Hach Company (Loveland, CO) instructions for Ferrous Iron Test Kit IR-18C.