



Iron and pH Test Kit

IR-23 (256200)

DOC326.97.00082

Test preparation

CAUTION: Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

- Put the color disc on the center pin in the color comparator box (numbers to the front).
- Rinse the tubes with sample before the test. Rinse the tubes with deionized water after the test.
- If the color match is between two segments, use the value that is in the middle of the two segments.
- If the color disc becomes wet internally, pull apart the flat plastic sides to open the color disc. Remove the thin inner disc. Dry all parts with a soft cloth. Assemble when fully dry.
- To verify the test accuracy, use a standard solution (buffer solution for pH test) as the sample.

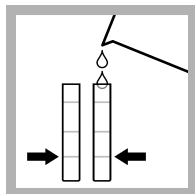
Iron:

- Use the indoor light color disc when the light source is fluorescent light. Use the outdoor light color disc when the light source is sunlight.
- Undissolved reagent does not have an effect on test accuracy.
- If the sample contains rust or precipitated iron, fully mix the sample and then fill the tubes. Wait 2–5 minutes after the FerroVer reagent is added. Dissolved iron develops a color immediately.
- Samples that contain high levels of iron can give low results. If high iron levels are possible, dilute the sample as follows. Use a 3-mL syringe to add 2.5 mL of sample to each tube. Dilute the sample to the 5-mL mark with deionized water. Use the diluted sample in the test procedure and multiply the result by 2. To make a larger dilution, add 1 mL of sample to each tube. Dilute the sample to the 5-mL mark with deionized water. Use the diluted sample in the test procedure and multiply the result by 5.
- If the sample contains copper, the sample can develop a yellow, blue or violet color. To remove the copper interference, add one 0.05-g spoon of RoVer Rust Remover to the sample before the FerroVer reagent and mix. Wait 5 minutes, then add the FerroVer reagent.

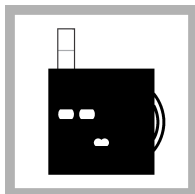
pH:

- Use sunlight or a lamp as a light source to find the color match with the color comparator box.
- More than 1 mg/L chlorine interferes with the pH test. To remove chlorine from the sample, add 1 drop of 0.1 N sodium thiosulfate solution to 25 mL of sample and mix. Use this dechlorinated sample in the test procedure. The sodium thiosulfate removes a maximum of 10 mg/L chlorine from the sample.

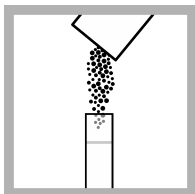
Test procedure—Iron (0–7 mg/L Fe)



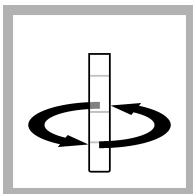
1. Fill two tubes to the first line (5 mL) with sample.



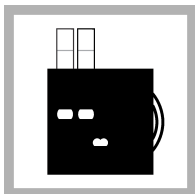
2. Put one tube into the left opening of the color comparator box.



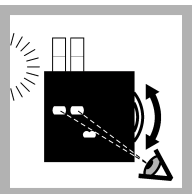
3. Add one FerroVer Iron Reagent Powder Pillow to the second tube.



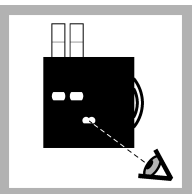
4. Swirl to mix. An orange color develops.



5. Put the second tube into the color comparator box.



6. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.



7. Read the result in mg/L in the scale window.

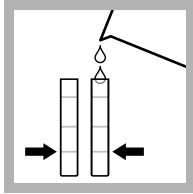
Replacement items

Description	Unit	Item no.
FerroVer® Iron Reagent Powder Pillows, 5 mL	100/pkg	92799
Wide range pH indicator solution	100 mL MDB	2329332
Color disc, iron, indoor light, 0–7 mg/L	each	9261000
Color disc, iron, outdoor light, 0–7 mg/L	each	9263700
Color disc, pH, wide range	each	990100
Color comparator box	each	173200
Glass viewing tubes, 18 mm	6/pkg	173006
Stoppers for 18-mm glass tubes and AccuVac Ampuls	6/pkg	173106

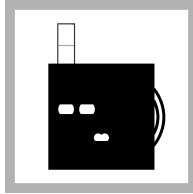
Optional items

Description	Unit	Item no.
pH 7.0 buffer solution, colorless	500 mL	1222249
Sodium thiosulfate, 0.1 N	100 mL MDB	32332
RoVer® Rust Remover	454 g	30001
Spoon, measuring, 0.05 g	each	49200
Iron standard solution, 1 mg/L Fe	500 mL	13949
Syringe, Luer-Lok® Tip, 3 mL	each	4321300
Water, deionized	500 mL	27249

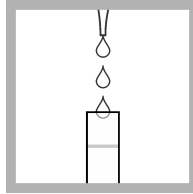
Test procedure—pH (4–10 pH units)



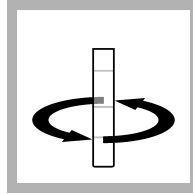
1. Fill two tubes to the first line (5 mL) with sample.



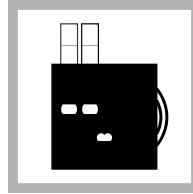
2. Put one tube into the left opening of the color comparator box.



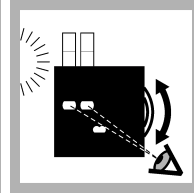
3. Add 6 drops of wide range pH indicator solution to the second tube.



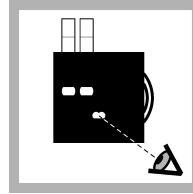
4. Swirl to mix.



5. Put the second tube into the color comparator box.



6. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.



7. Read the result in pH units in the scale window.

