Formaldehyde Test Kit

FM-1 (2183100)

DOC326.53.00119

Test preparation

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

- Dilute samples that contain 1 to 10% formaldehyde with demineralized water. A demineralizer bottle is supplied in the kit. Refer to Use of the demineralizer bottle on page 1.
- Chlorine concentrations 80 mg/L or less do not interfere with this test.
- Hardness concentrations of 1000 mg/L or less as $CaCO_3$ do not interfere with this test.
- The test is accurate for samples that are 10 to 35 °C (50 to 95 °F) with a pH of 2 to 11.
- Rinse the plastic dropper with sample before the test. Rinse the plastic dropper with clean water after the test. Use a new plastic dropper after ten tests.
- Rinse the glassware with sample before the test. Rinse the glassware with clean water after the test.
- Hold the dropper vertically above the sample. Do not let the dropper touch the bottle during the titration.

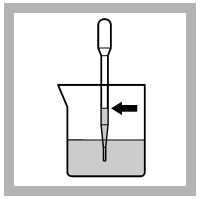
Replacement items

Description	Unit	Item no.
Formaldehyde Reagent 1 Powder Pillows	100/pkg	2182999
Sulfuric acid, 1.90 N	100 mL MDB	2183032
Thymolphthalein Indicator Solution	15 mL SCDB	2185336
Demineralizer bottle, 177 mL	each	1429900
Droppers	20/pkg	2124720
Square mixing bottles	6/pkg	232706

Use of the demineralizer bottle

To use the included demineralizer bottle, remove the cap from the bottle and fill with tap water. Be careful not to lose any of the blue ion exchange resin from the bottle. Install the cap and shake the bottle to mix. Use the water from the demineralizer bottle as demineralized water. Replace the resin in the demineralizer bottle when the resin changes from purple to gold.

Test procedure—Formaldehyde (1–10%)

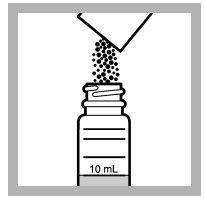


1. Fill a dropper to the 1-mL mark with the sample.

2. Add the sample to the square mixing bottle.

3. Add demineralized water to the 10-mL mark.

4. Swirl the bottle to mix.

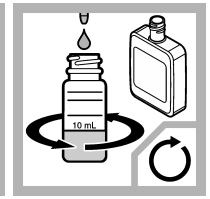


5. Add one Formaldehyde Reagent 1 Powder Pillow.

6. Swirl the bottle for 20 seconds.

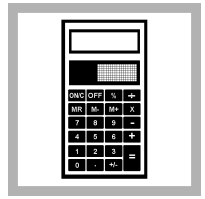
7. Add two drops of Thymolphthalein Indicator Solution to the bottle.

8. Swirl the bottle for 5 seconds. A blue color develops.



9. Add Sulfuric Acid 1.90 N by drops. Hold the dropper vertically.

Swirl the bottle after each drop. Count the drops until the color changes to colorless.



10. Multiply the total number of drops by 0.005 to get the percent formaldehyde.

If only one drop changes the color from blue to colorless, use the 0–1% test procedure.

Test procedure—Formaldehyde (0–1%)

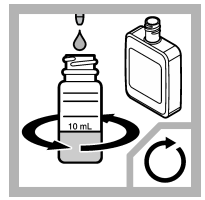
1. Fill a square mixing bottle to the 10-mL mark with the sample.

2. Add one Formaldehyde Reagent 1 Powder Pillow.

3. Swirl the bottle for 20 seconds.

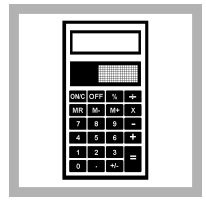
4. Add two drops of Thymolphthalein Indicator Solution to the bottle.

5. Swirl the bottle for 5 seconds. A blue color develops.



6. Add Sulfuric Acid 1.90 N by drops. Hold the dropper vertically.

Swirl the bottle after each drop. Count the drops until the color changes to colorless.



7. Multiply the total number of drops by 0.0005 to get the percent formaldehyde.