



# **COLIFORM INDICATOR TEST KIT**

**MODEL TC-5 • CODE 4-3616**

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The Model TC-5 is an easy-to-use, disposable 5-tube method to indicate the presence of Total Coliform Bacteria in a drinking water supply. The water sample is placed in test vials containing the special coliform indicating tablets and stored at room temperature for a predetermined time period. After the required storage period, the vials are examined to determine the presence of coliform bacteria. The test method and results closely parallel the standard Total Coliform Multiple-Tube Presumptive Test (MPN) as outlined in Standard Methods for the Examination of Water and Wastewater.

Carefully read through the instructions completely before attempting to collect sample or run the test.

## **CONTENTS**

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Each kit contains 5 glass tubes, marked at the 10 mL level and containing one Coliform Test Tablet. A sterile Water Sampling Bag containing a dechlorinating tablet is included for chlorine removal.

## **INTRODUCTION:**

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The tablets in the Model TC-5 contain nutrients to support the growth of coliform bacteria, a gelling substance, and a pH indicator. If coliform organisms are present in the sample, gas will be generated as a result of the bacteria metabolizing the nutrients in the tablet. This gas will be trapped in the gelling substance and cause the gel to rise in the tube. The pH indicator may change color from red to yellow as further evidence of coliform bacteria activity. Suggestion: As the test requires a 44-48 hour incubation time, we recommend sampling at a time period convenient to the user to read the end result.

## **STORAGE**

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The unused kit should be stored at room temperature and out of direct sunlight. Keep away from children. This product is to be used for water analysis tests only.

## **CHLORINE RESIDUAL PRECAUTIONS**

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### **SAMPLE COLLECTION & TEST PROCEDURE**

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- 1.** Determine sample source, i.e. water spigot, faucet, system sample valve, etc.
- 2.** Soak cotton ball or gauze with household alcohol and wipe entire water outlet area of spigot, faucet or test valve. Pay particular attention to faucet aerator screens and mixers.
- 3.** Allow tap (cold water) to run for 2 to 3 minutes or until the line is flushed.
- 4.** Reduce tap water flow to a rate that will fill the Water Sampling Bag slowly without splashing. Tear off top of bag at scored line and pull tabs outward to open bag. Do not touch bag opening or inner surface.
- 5.** Fill bag to 4 oz. fill line, pull wire ends to close and whirl bag 3 complete revolutions. Shake bag to dissolve tablet.

**CAUTION:** Do not allow the tablet to fall out of the bag.

### **OPENING**

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- A.** Tear off top at scored line.
- B.** Pull tabs outward to open bag. Sometimes a pull on the bottom is also helpful.

### **FILLING**

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- C.** Fill bag to the 4 oz. fill line.

### **CLOSING**

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- D.** Pull wire ends to close bag.
- E.** Whirl bag 3 complete revolutions. (Do not roll tapes down.)
- F.** Turn tape wire inward on opposite face of fold.
- 6.** Remove all 5 tubes from the display package and remove caps.

**NOTE:** Do not remove tablet from tube.

**CAUTION:** To avoid contamination, do not touch the inner surface of the caps, tubes, or handle tablet.

- 7.** Unwhirl bag and pull tabs outward to open bag. Fold one tape wire inward to form a spout(see Figure 1). Carefully fill all 5 tubes to the 10 mL line with water sample. Replace caps tightly. Do not mix or shake tubes.

8. Stand the carton upright and place all 5 tubes into the display package. All tubes should now be standing vertically with the tablet at the bottom of the tube (see Figure 2). Tablet should lie flat on bottom of tube.
9. Store tubes at room temperature, out of direct sunlight, for 44-48 hours. Air temperature should be fairly constant and between 70°-85°F.

**NOTE:** Do not disturb, handle, or shake tubes during the designated incubation time period. If these storage conditions are not followed precisely, the results of the test may vary and may not be valid.

## TEST RESULTS

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### POSITIVE TEST

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- Indicator turns yellow\*
- Many gas bubbles evident within gelling substance
- Gel rises to surface of sample
- Substrate below gel is cloudy

### NEGATIVE TEST

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- Indicator remains red or turns yellow with few gas bubbles\*
- Gelling substance remains on bottom of tube
- Substrate above gelling substance should be clear
- See Figure 4

**NOTE:** Some water samples with a pH below 6.8 will cause the indicator to turn yellow prematurely. This is not indicative of a positive result.

Both the yellow color and gas bubbles must be evident in order to establish a positive test result. Gel will float to surface of sample indicating gas formation. Substrate below should be cloudy.

## RESULTS ANALYSIS

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A positive result in any one of the five tubes should be regarded as a potential coliform bacterial contamination. If a positive result is found in two or more tubes, there is a potential for a serious bacterial contamination problem. Further steps should be taken to validate these results by a certified bacteriological laboratory.

## **DISPOSAL**

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After results are recorded, dispose of the inoculated tubes as follows:

- Remove all 5 tubes from display package.
- One tube at a time, remove cap and add approximately 1 mL (or 1/3 teaspoon) of household bleach (chlorine bleach) to the tube and immediately recap. Follow the above procedure for all 5 tubes.
- Return tubes to foam tray and again stand upright. Let tubes stand for approximately 4 hours.
- Dispose of tubes and package as required by local jurisdiction. Do not open tubes or attempt to clean for reuse.

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