

# Arsenic Test Kit

Innovative cap design  
adds safety and sensitivity!

1



1. Slide the test strip into the groove.

2



2. Verify that the test strip pad is positioned over the hole.

3



3. Add the sample and reagents and allow to react for 30 minutes.

## Safe, low-cost method for detecting arsenic levels down to 10 ppb

Minimize the hazards normally associated with arsenic testing using the new Arsenic Test Kit from Hach. It's an easy-to-use, low-cost method for measuring arsenic levels in drinking water – down to 10 ppb – that minimizes your exposure to arsine gas. The kit is compact and portable, perfect for determining arsenic concentrations for monitoring or treatment purposes safely, quickly and easily.

The Hach method for arsenic uses a series of powdered reagents and Arsenic Test Strips. Each kit contains all the reagents and apparatus you need for 100 tests, and is specially designed to minimize your exposure to hazardous reagents and arsine gas.

*Minimizes reagent hazard:* The Hach Arsenic Test Kit uses powdered reagents for safety. Four of the five reagents used in this test are packaged in Hach PermaChem™ powder pillows – single use, premeasured reagent packets that mean minimal handling and greater reagent stability. The formulation of the reagents used in this test also eliminates any interference from sulfide in the water sample.

### *Eliminates exposure to arsine gas:*

Hach specially designed the cap used in the test kit to position the test strip so that all of the arsine gas generated during the reaction is focused directly onto the reactive pad on the test strip. This special feature provides enhanced sensitivity for arsenic and virtually eliminates your exposure to arsine gas.

In just 30 minutes, a color develops on the Arsenic Test Strip based on how much arsine gas was generated in the reaction. The result is then determined by comparing the test strip to a color chart. The semi-quantitative "steps" of this test are 0, 10, 30, 50, 70, 300 and 500 ppb, providing an overall range of 0-500 ppb. The test kit comes with two reaction vessels with caps so two tests can be run simultaneously.

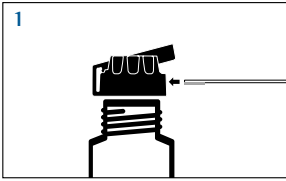
To order the new Arsenic Test Kit from Hach, visit our web site at [www.hach.com](http://www.hach.com) or call 1.800.227.4224. For a quote, fill out the quotation form on our web site and we'll get you the information you need, usually within 24 hours.



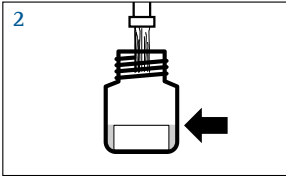
# Arsenic

## Test Kit

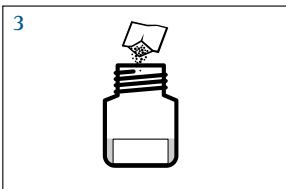
### Simplified Test Procedure



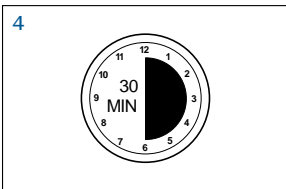
1. Lift the flap on the black cap and slide a test strip into the groove so that the reactive pad faces the small opening and completely covers it; secure by pressing the flap back into place.



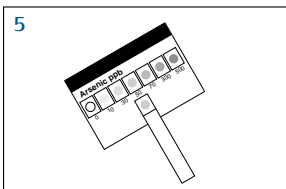
2. Fill the reaction vessel with sample water to the top edge of the label (50 mL).



3. Add arsenic reagents #1, #2, #3, #4, and #5 to the sample and swirl to dissolve.



3. Allow the vessel to react for 30 minutes, but no more than 35 minutes; swirl twice during the reaction period.



3. Remove the test strip and immediately compare the developed color to the chart on the test strip bottle.

### Method Summary

Hydrogen sulfide is first oxidized to sulfate to prevent interference, and the oxidizing environment is then neutralized. Sulfamic acid and powdered zinc react to create strong reducing conditions in which inorganic arsenic is reduced to arsine gas ( $\text{AsH}_3$ ). The arsine gas then reacts with mercuric bromide in the test strip to form mixed arsenic/mercury halogenides that discolor the test strip. The color ranges from yellow through tan to brown, depending on the concentration.

The instructions, as written for this test, are designed to detect inorganic arsenic –  $\text{As}_{3+}$  and  $\text{As}_{5+}$ . Organic arsenic represents a small proportion of arsenic in most samples. Organic arsenic compounds, such as dimethylarsenic acid, are not detected. Total arsenic (organic and inorganic) can be quantified with this kit with a simple modification of the test procedure. Specific instructions for determining total arsenic are provided with the kit.

### Ordering Information

- 28000-00:** Arsenic Test Kit  
Contains the apparatus and reagents needed to perform 100 tests.
- 27999-00:** Arsenic Test Kit Reagent Set  
Includes replacement reagents for 100 tests.

To order, call 800.227.4224 or e-mail [orders@hach.com](mailto:orders@hach.com). For a quote, fill out the quotation form on our web site at [www.hach.com](http://www.hach.com) and we'll get you the information you need, usually within 24 hours.

For current price information, technical support and ordering assistance, contact the Hach office or distributor serving your area.

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