



**DC** Water Test  
Hexavalent Chromium  
Ultra Low and Low Ranges Wide Span  
(PN: 82001)



*Manual*



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### 1. Application

The DG Water Test PN: 82001 is a colorimetric water test kit designed to provide real-time indication and quantification of hexavalent chromium in water.

### 2. Components of the Test Kit

- 30 Sample Vials, PN: 82001-1030
- One Developing Solution Bottle, PN: 82001-2000
- 30 Disposable Pipettes, PN: 83301-3030
- One Color Comparator, PN: 82001-6000

### 3. Components of the Test Kit Refill

- 30 Sample Vials, PN: 82001-1030
  - One Developing Solution Bottle, PN: 82001-2000
  - 30 Disposable Pipettes, PN: 83301-3030
- To Reorder: PN: 82001-5000

### 4. Specifications

#### 4.1. Overall Specification

##### A. Sample Vial

- Weight: 0.75g (0.027oz)
- Dimensions: 3.3cm (1.3in),  $\Phi$ : 10mm (0.4" in)
- Operating temperature: 4°C to 60°C (39°F to 140°F)
- Minimum detectable limit: 0.025ppm in 5 minutes
- Detection range with color comparator: 0.025 to 12ppm
- Color change: Colorless to pink or purple
- Storage temperature: 4°C to 25°C, (39°F to 77°F)
- Shelf life: 1 year

##### B. Developing Solution

- Weight: 9.g (0.32oz)
- Dimensions: 2.3cm (0.9in),  $\Phi$ : 18mm (0.69" in)

##### C. Color Comparator

- Weight: 28g (1oz)
- Dimensions: 10.9cm (4.3in) x 10.5cm (4.1in) x 0.7cm (0.3in)
- Range: 0.025ppm to 12ppm
- Increments (ppm): 0.025, 0.05, 0.1, 0.15, 0.2, 0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95, 1.0, 1.2, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 10.0, 10.5, 11.0, 11.5, 12.0.

##### D. Disposable Pipette

- Weight: 0.75g (0.027oz)
- Dimensions: 15cm (6in),  $\Phi$ : 1.3cm (0.5" in)
- Capacity: 0.5ml

#### 4.2. Cross interferences

None known

### 5. Operating Instructions

- Use gloves and protective glasses when handling Hexavalent chromium.
- Ensure that packaging pouch is intact.
- Open packaging pouch by tearing off the top part from one of side notches.
- Remove one sample vial from packaging pouch.
- Open sample vial cap and add 0.4ml of water sample using the disposable pipette (Figure 1).
- Add three drops of developing solution to sample vial (Figure 2).
- Firmly close sample vial cap and shake (Figure 3).
- Wait 5 minutes with occasional shaking for complete color development

NOTE: Reading the result before 5 minutes or waiting much longer than 5 minutes may lead to negative or positive results.

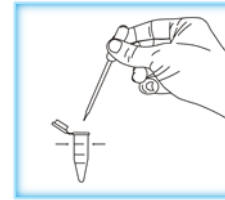


Figure 1

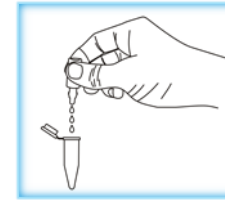


Figure 2

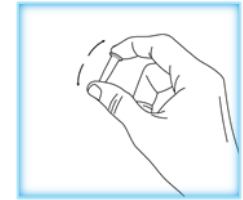


Figure 3

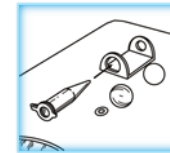


Figure 4

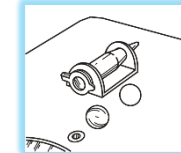


Figure 5



Figure 6

- Use the color comparator (Figure 6) to determine the concentration of hexavalent chromium in the water sample
  - Insert the sample vial into the vial holder as shown in Figures 4 and 5.
  - Turn the bottom color wheel to match colors. The color formed in the sample vial is directly proportional to the concentration of hexavalent chromium in the water sample.
  - If the color of the sample vial is darker than the darkest color on the bottom wheel. Reset the bottom wheel to the black diamond and turn top wheel anticlockwise until color match obtained.
  - If the color of the sample vial still is darker than the darkest color of the top wheel, dilute your sample with equal amount of DI water and repeat steps (a) to (c), make sure to multiply the reading on the wheel by two after diluting your sample.