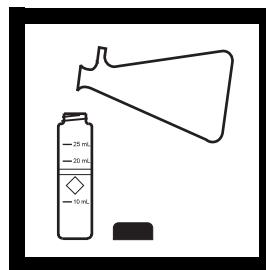
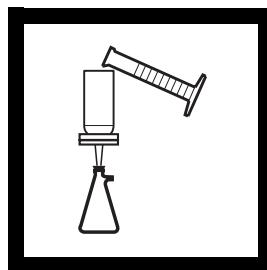
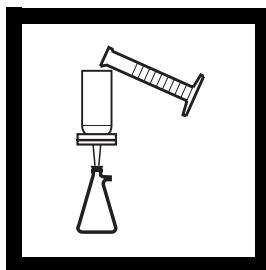
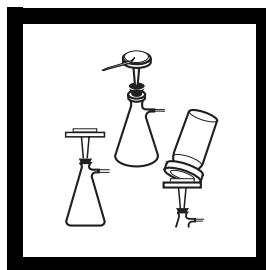


**COLOR, TRUE AND APPARENT (0 to 500 units)****APHA Platinum-Cobalt Standard Method\*****For water, wastewater and seawater**

- 1.** Assemble the filtering apparatus (membrane filter, filter holder, filter flask, and aspirator).

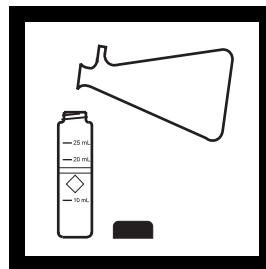
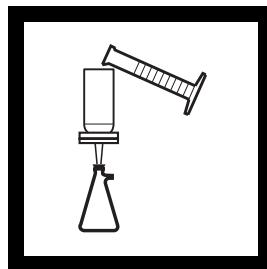
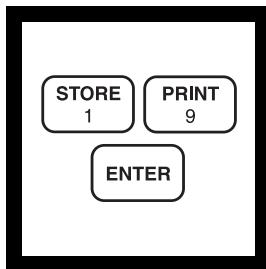
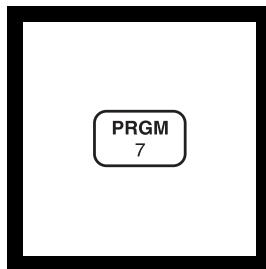
*Note:* To test for apparent color, do not filter; begin at Step 4 and skip Step 7.

- 2.** Rinse the filter by pouring about 50 mL of deionized water through the filter. Discard the rinse water.

- 3.** Pour another 50 mL of deionized water through the filter. Keep this for Step 4.

- 4.** Fill a sample cell (the blank) with 25 mL of filtered deionized water. Discard the excess.

*Note:* For apparent color use unfiltered deionized water.



- 5.** Enter the stored program number for APHA color.

Press: **PRGM**

The display will show:

**PRGM ?**

- 6.** Press: **19 ENTER**

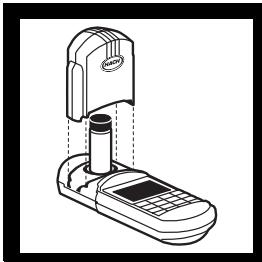
The display will show **PtCo** and the **ZERO** icon.

- 7.** Pour about 50 mL of sample through the filter.

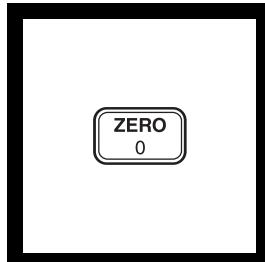
- 8.** Fill a second sample cell (the prepared sample) with 25 mL of the filtered sample.

\* Adapted from *Standard Methods for the Examination of Water and Wastewater*

## COLOR, TRUE AND APPARENT, continued



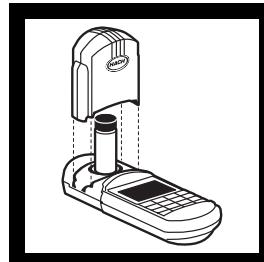
**9.** Place the blank into the cell holder. Tightly cover the sample cell with the instrument cap.



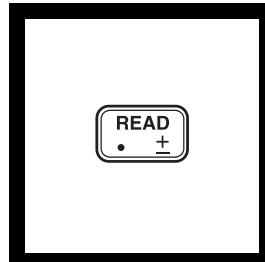
**10.** Press: **ZERO**

The cursor will move to the right, then the display will show:

**0 mg/L Pt Co**



**11.** Place the prepared sample into the cell holder. Tightly cover the sample cell with the instrument cap.



**12.** Press: **READ**

The cursor will move to the right, then the result in Platinum-Cobalt color units (Pt-Co) will be displayed.

*Note: Standard Adjust may be performed using a prepared standard (see Standard Adjust in Section 1).*

### Sampling and Storage

Collect samples in clean plastic or glass bottles. Analyze the sample as soon as possible after collection for best results. If prompt analysis is impossible, fill bottles completely and cap tightly. Avoid excessive agitation or prolonged contact with air. Samples can be stored for 48 hours by cooling to 4 °C (39 °F). Warm to room temperature before running the test.

### Accuracy Check

#### Standard Solution Method

A 500 Platinum-Cobalt Units Color Standard solution is available for checking test accuracy. A 250 Platinum-Cobalt Units Standard can be made by pipetting 50.0 mL of the 500 Platinum-Cobalt Units Standard into a 100-mL volumetric flask and diluting to volume with deionized water.

### Method Performance

#### Precision

In a single laboratory, using a standard solution of 250 Pt-Co color units and two representative lots of reagent with the instrument, a single operator obtained a standard deviation of  $\pm 10$  Pt-Co color units. For more information on Hach's precision statement, see Section 1.

# COLOR, TRUE AND APPARENT, continued

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## Estimated Detection Limit

The estimated detection limit for program 19 is 25 Pt-Co color units. For more information on the estimated detection limit, see *Section 1*.

## Summary of Method

Color may be expressed as "apparent" or "true" color. The apparent color includes color from dissolved materials plus that from suspended matter. By filtering or centrifuging out the suspended materials, the true color can be determined. The procedure describes true color analysis. If apparent color is desired, it can be determined by measuring an unfiltered water sample. The stored program is used for both forms of color.

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## REQUIRED REAGENTS

Description	Quantity Required		
	Per Test	Units	Cat. No.
Water, deionized	50 mL	4 L	272-56

## REQUIRED APPARATUS

Aspirator, vacuum	1	each	2131-00
Filter Holder, 47 mm, 300 mL graduated	1	each	13529-00
Filter, membrane, 47 mm, 0.45 microns	1	100/pkg	13530-00
Flask, filtering, 500 mL	1	each	546-49
Sample Cell, 10-20-25 mL, w/cap	2	6/pkg	24019-06
Stopper, No. 7, one hole	1	6/pkg	2119-07

## OPTIONAL REAGENTS

Color Standard Solution, 500 platinum-cobalt units	1 L	1414-53
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## OPTIONAL APPARATUS

Cylinder, graduated, 50-mL, glass	each	508-41
Flask, volumetric, Class A, 100 mL	each	14574-42
Pipet, volumetric, Class A, 50 mL	each	14515-41
Thermometer, -10 to 110 °C	each	1877-01

## *For Technical Assistance, Price and Ordering*

In the U.S.A.—Call 800-227-4224

Outside the U.S.A.—Contact the Hach office or distributor serving you.