

## Color of Water

### Handheld Colorimeter

- Easier to use and more accurate than chemical test kits
- Dedicated to a single parameter
- Small size, big convenience
- Ideal for water quality

True color is caused by dissolved compounds in water and can be both natural or artificial. Apparent color is caused by both dissolved and suspended solids. Color is measured in Platinum-Cobalt units (PCU). The AWWA recommends  $\leq 15$  PCU.

The term "true color" is defined as the color of water from which turbidity has been removed. The term "apparent color" includes not only color due to substances in solution, but also color that is due to suspended matter. Apparent color is determined on the original sample without filtration or centrifugation. In some highly-colored industrial wastewaters, color is contributed principally by colloidal or suspended material. In such cases, both true color and apparent color should be determined.

To determine true color, turbidity must be removed before analysis. Methods for removing turbidity without removing color vary. Filtration yields results that are reproducible from day to day among laboratories, however, some filtration procedures may also remove some true color. Centrifugation avoids interaction of color with filter materials, but results vary with the sample nature, size, and speed of the centrifuge. When sample dilution is necessary, whether it precedes or follows turbidity removal, it can alter the measured color. Acceptable pretreatment procedures are included with each method. The pretreatment method should be stated when reporting the results.

The HI727 Checker®HC is very simple to use. First, zero the instrument with deionized water. Next, prepare the sample according to the Apparent/True color measurement. Place the second vial with prepared sample into the Checker HC, press the operational button and the HI727 Checker® displays the color of water in PCU.



Specifications	HI727
Range	0 to 500 g/L PCU
Resolution	5 PCU
Accuracy	$\pm 10$ PCU $\pm 5\%$ of reading @ 25 °C (77 °F)
Light Source	Light Emitting Diode @ 470 nm
Light Detector	Silicon photocell
Method	Adaptation of the Standard Methods for the Examination of Water and Wastewater 21st Edition, Colorimetric Platinum Cobalt Method
Environment	0 to 50 °C (32 to 122 °F); max. 95% RH non-condensing
Battery Type	1.5V AAA Alkaline
Auto-off	After 10 minutes of non-use and 2 minutes after reading
Dimensions	86.0 x 61.0 x 37.5 mm (3.4 x 2.4 x 1.5")
Weight	64 g (2.3 oz)
<b>Ordering Information</b>	<b>HI727</b> Checker®HC is supplied with sample cuvette and cap (2 pcs.), 1.5V AAA Alkaline battery (1 pc.), and instruction manual.
<b>Calibration Set</b>	<b>HI727-11</b> Color of Water certified standard kit
<b>Accessories</b>	<b>HI40227</b> Filter assembly
	<b>HI40228</b> Filter disc (25 pcs.)

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