

# HI 3846 Chromium Test Kit

**HANNA**  
instruments  
www.hannainst.com

Dear Customer,

Thank you for choosing a Hanna Product. Please read the instructions carefully before using the chemical test kit. It will provide you with the necessary information for correct use of the kit.

Remove the chemical test kit from the packing material and examine it carefully to make sure that no damage has occurred during shipping. If there is any noticeable damage, notify your Dealer or the nearest Hanna office immediately.

Each kit is supplied with:

- HI 3846-0 Reagent, packets (100 pcs);
- 1 color comparator cube.

**Note:** Any damaged or defective item must be returned in its original packing materials.

05/99 PRINTED IN ITALY ISTR3846

## SPECIFICATIONS

Range	0 to 1.0 ppm as Cr(VI)
Smallest Increment	0.2 ppm
Analysis Method	Colorimetric, diphenylcarbohydrazide
Sample Size	5 mL
Number of Tests	100 (average)
Case Dimensions	230x59x70 mm (9.0x2.3x2.8")
Shipping Weight	160 g (5.6 oz.)

## SIGNIFICANCE AND USE

Chromium salts are widely used in industrial processes, such as metal finishing and plating industries as well as in the leather industry as a tanning agent, and in the manufacture of paints, dyes, explosives and ceramics. Chromium may enter a water supply through the discharge of waste from these industries and may also be discharged from chromate-treated cooling waters, where they are frequently added for corrosion control. The hexavalent state of chromium is toxic to humans, animals and aquatic life: it can produce lung tumors when inhaled and readily induces skin sensitization.

**Note:** mg/L is equivalent to ppm (parts per million).

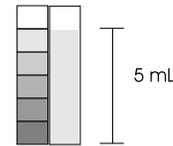
## CHEMICAL REACTION

Chromium(VI) reacts with diphenylcarbohydrazide to form a purple product in an acidic buffered condition. The amount of color developed is proportional to the concentration of chromium present in the aqueous sample.

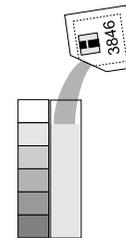
## INSTRUCTIONS

READ THE ENTIRE INSTRUCTIONS BEFORE USING THE KIT

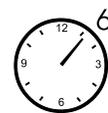
- Fill one color comparator cube with 5 mL of the sample (to the mark).



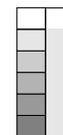
- Add 1 packet of HI 3846-0, replace the cap and shake well.



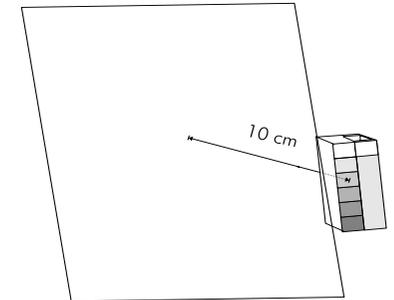
- Wait 6 minutes to allow color to develop.



- Determine which color matches the solution in the vessel and record the results in mg/L (or ppm) of chromium (VI).



- It is better to match the color with a white sheet at about 10 cm behind the comparator.



**Note:** To measure Chromium in the 0-1000 ppm range, use the HI 3845 Chromium Medium Range and High Range Test Kit.

## REFERENCES

Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> ed., 1992  
APHA/AWWA/WEF

## HEALTH AND SAFETY

The chemicals contained in this test kit may be hazardous if improperly handled. Read Health and Safety Data Sheets before performing the test.