

HI 770

# Silica High Range Handheld Colorimeter

Silica is the name given to silicon dioxide,  $\text{SiO}_2$ . Silicon, Si, is the most abundant element in the Earth's crust, 28% of it by weight. Silicon is never found free form in nature. In crystallized form it is only reactive under conditions of extremely high temperatures. Water and water vapor probably have little influence upon silicon solubility, because a protective surface layer of silicon dioxide is rapidly formed. Silicon binds with other elements to form various species of silica and silicate. The concentration of the soluble silica molecules are important to aquaculture because they influence (and limit) the growth of diatoms.

In most waters, the predominant form of dissolved silica is monosilicic acid, which incorporates 2 water molecules.

The HANNA HI 770 Checker®HC is accurate and affordable. This portable handheld colorimeter features a resolution of 1 ppm (200 points) and  $\pm 2$  ppm  $\pm 5\%$  of reading accuracy.

The contoured style of the HI 770 Checker®HC fit in your palm and pocket perfectly and the large LCD is easy to read. The auto shut off feature assures the battery life will not be drained if you forget to turn it off.

The HI 770 Checker®HC is simple to use. First, zero the instrument with your water sample. Next, add the reagents in order, respecting all the indications. Last, place the vial into the Checker®HC, press the operational button for about 3 seconds and the display will show the countdown prior to the measurement or, alternatively, wait for 2 minutes after last reagent adding and press operational button. The Checker®HC displays concentration in ppm of Silica as  $\text{SiO}_2$ .



## Easier to use and more accurate than chemical test kits

- Adaptation of EPA Diazotization method
- $\pm 2$  ppm  $\pm 5\%$  of reading accuracy
- 1 ppm resolution (200 points)
- Auto shut off

## Dedicated to a single parameter

- Designed to work with HANNA's powder reagents
- Uses 10 mL glass cuvettes

## Small size, big convenience

- Weighing a mere 64 g (2.25 oz.), the Checker®HC easily fits into the palm of your hand or pocket
- Use for quick and accurate on the spot analysis
- Single button operation: zero and measure
- Operated by a single AAA battery

## Ideal for:

- Aquaculture

## ORDERING INFORMATION

HI 770 Checker®HC is supplied with sample cuvettes with caps (2 ea.), powder reagents for 6 tests, battery and instructions.

## REAGENTS AND STANDARDS

- HI 770-25 Reagents for 25 tests (Silica HR)
- HI 770-11 Calibration checking set (0 and 100 ppm)

## ACCESSORIES

- HI 731318 Cuvette cleaning cloth (4)
- HI 731321 Glass cuvettes (4)
- HI 731225 Caps for cuvettes (4)
- HI 93703-50 Cuvette cleaning solution, 230 mL

SPECIFICATIONS	HI 770 (Silica HR)
Range	0 to 200 ppm
Resolution	1 ppm
Accuracy @ 25°C/77°F	$\pm 2$ ppm $\pm 5\%$ of reading
Light Source	LED @ 470 nm
Light Detector	silicon photocell
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing
Battery Type	1.5V AAA
Auto-off	after two minutes of non-use
Dimensions	81.5 x 61 x 37.5 mm (3.2 x 2.4 x 1.5")
Weight	64 g (2.25 oz.)
Method	adaptation of the USEPA METHOD 370.1 for drinking, surface and saline waters, domestic and industrial wastes and Standard Method 4500-SiO <sub>2</sub> C



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