



## **Checker®HC**

Handheld Colorimeters



www.itn.com

1.800.561.8187

information@itm.com



### Hanna Checker®HC Series

#### Handheld Colorimeters

The Hanna Checker®HC bridges the gap between simple chemical test kits and professional instrumentation. Chemical test kits are not very accurate and only give 5 to 10 points resolution while professional instrumentation can cost hundreds of dollars and can be time consuming to calibrate and maintain. The Checker®HC is both accurate and affordable.

The contoured style of the Checker®HC fits in your palm and pocket perfectly, while 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.

- Easier to use and more accurate than chemical test kits
  - High accuracy
  - · Large, easy-to-read digits
  - · Auto shut-off
- Dedicated to a single parameter
  - Designed to work with Hanna's reagents
  - Uses 10 mL glass cuvettes
- Small size, big convenience
  - Weighing a mere 64 g (2.25 oz.), the Checker®HC easily fits in your palm or pocket
- Use for quick and accurate on-the-spot analysis
- Single-button operation: zero and measure
- Operated by a single AAA battery



## Calibration Checking Sets

Our optional Checker®HC Calibration Sets provide a simple solution to validating your Checker® HC. Each high quality set of standards is manufactured in our state-of-the-art facility and comes supplied with a Certificate of Analysis. The Certificate of Analysis provides the lot number, reference values and expiration date to provide traceability when certifying the Checker® HC.





#### **General Specifications for All Models**

Light Detector	silicon photocell
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing
Battery Type	(1) 1.5V AAA
Dimensions	86 x 59.8 x 36.6 mm (3.4 x 2.4 x 1.5")
Weight	64 g (2.25 oz.)







## Seawater and Fresh Water Alkalinity

#### Handheld Colorimeters

- Ideal for
  - · Saltwater aquariums (HI755)
  - · Fresh water aquariums (HI775)

The HI755 and HI775 Checker®HC's are a simple, accurate, and cost effective ways to measure alkalinity in seawater and fresh water. Designed as a more accurate alternative to chemical test kits, these handheld colorimeters provide quick, accurate alkalinity testing results.



HI700 • HI715 • HI733

## Ammonia Low, Medium and High Range

#### Handheld Colorimeters

- Ideal for
  - · Water quality
  - Aquariums
  - Environmental

The HI700, HI715, and HI733 Checker®HC's are simple, accurate, and cost effective ways to measure ranges of ammonia in fresh water.

Specifications	HI755 (Seawater)	HI775 (Fresh water)
Range	0 to 300 ppm CaCO₃	0 to 500 ppm CaCO₃
Resolution	1 ppm	1 ppm
Accuracy @ 25°C/77°F	±5 ppm ±5% of reading	
Light Source	LED @ 610 nm	
Auto-off	after ten minutes of non-use	
Method	colorimetric method	
Ordering Information	HI755 Checker®HC is supplied with sample cuvettes with caps (2), seawater alkalinity reagent starter kit (reagents for 25 tests), syringe with tip, battery, instructions and quick start guide.  HI775 Checker®HC is supplied with sample cuvettes with caps (2), alkalinity reagent starter kit (reagents for 25 tests), syringe with tip, battery, instructions and quick start guide.	
Reagent Set	HI755-26 (25 tests)	HI775-26 (25 tests)
Calibration Set	HI755-11	HI775-11

Specifications	HI700 (LR)	HI715 (MR)	HI733 (HR)
Range	0.00 to 3.00 ppm NH <sub>3</sub> -N	$0.00$ to $9.99$ ppm $NH_3$ -N	0.0 to 99.9 ppm as NH₄
Resolution	0.01 ppm	0.01 ppm	0.1 ppm
Accuracy @ 25°C/77°F	±0.05 ppm ±5% of reading	±0.05 ppm ±5% of reading	±1.0 ppm ±5% of reading
Light Source	LED @ 470 nm		
Auto-off	after ten minutes of r	ion-use	
Method	adaptation of the ASTM Manual of Water and Environmental Technology D1426-92, Nessler Method		
	HI700 Checker®HC is supplied with sample cuvettes with caps (2), ammonia LR reagent starter kit (reagents for 25 tests), battery, instructions and quick start guide.		
Ordering Information	<b>HI715</b> Checker®HC is supplied with sample cuvettes with caps (2), ammonia MR reagent starter kit (reagents for 25 tests), battery, instructions and quick start guide.		
	ammonia HR reagent	supplied with sample co starter kit (reagents for ttery, instructions and o	10 tests), syringe with
Reagent Set	HI700-25 (25 tests)	HI715-26 (25 tests)	HI733-25 (20 tests)
Calibration Set	HI700-11	HI715-11	HI733-11





## Bromine

#### Handheld Colorimeter

- Ideal for
  - Water quality
  - Education
  - · Swimming pools/hot tub sanitization
  - Environmental

The HI716 Checker®HC is a simple, accurate, and cost effective way to measure Bromine. Designed as a more accurate alternative to chemical test kits, the HI716 provides quick, accurate results in four easy steps.

#### Specifications HI716

<b>Calibration Set</b>	HI716-11
Reagent Set	HI716-25 (25 tests)
Ordering Information	HI716 Checker®HC is supplied with sample cuvettes with caps (2), bromine reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.
Method	adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, DPD method
Auto-off	after ten minutes of non-use
Light Source	LED @ 525 nm
Accuracy @ 25°C/77°F	±0.1 ppm ±5% of reading
Resolution	0.1 ppm
Range	0.0 to 8.0 ppm

## Marine Calcium

#### Handheld Colorimeter

- Ideal for
  - Aquaculture
  - · Aquariums

Calcium presence in water supplies results from passage over deposits of limestone, dolomite, gypsum and gypsiferous shale. The concentration may extend from 0 to several hundred milligrams per liter, depending on its source and treatment. Calcium is necessary in plant and animal nutrition since it is an essential constituent of bones, shells and plant structures. Calcium in water as carbonate is one of the primary components of water hardness which can cause pipe or tube scaling.

#### Specifications HI758

Range	200 to 600 ppm
Resolution	1 ppm
Accuracy @ 25°C/77°F	±6% of reading
Light Source	LED @ 610 nm
Auto-off	after ten minutes of non-use
Method	adaptation of the Zincon method
Ordering Information	HI758 Checker®HC is supplied with sample cuvettes with caps (2), marine calcium reagent starter kit (reagents for 25 tests), syringes with tips (25), plastic pipette, battery, instructions and quick start guide.
Reagent Set	HI758-26 (25 tests)
Calibration Set	HI758-11

### HI753 Chloride

#### Handheld Colorimeter

- Ideal for:
  - Drinking water
  - · Waste water
  - Boiler and cooling towers

The HI753 Checker®HC is a simple, accurate, and cost effective way to measure chloride. Designed as a more accurate alternative to chemical test kits, the HI753 provides quick, accurate results in three easy steps.

#### Specifications HI753

Range	0.0 to 20.0 ppm
Resolution	0.1 ppm
Accuracy @ 25°C/77°F	± 0.5 ppm ± 6% of reading
Light Source	LED @ 470 nm
Auto-off	after ten minutes of non-use
Method	adaptation of the mercury(II) thiocyanate method
Ordering Information	HI753 Checker®HC is supplied with sample cuvettes with caps (2), chloride reagent starter kit (reagents for 25 tests), syringes with tips (2), battery, instructions and quick start guide.
Reagent Set	HI753-25 (25 tests)
Calibration Set	HI753-11





## Free Chlorine

Handheld Colorimeter

- Ideal for:
  - · Swimming pools and spas
  - · Fruit and vegetable sanitation
  - Disinfection
  - · Drinking water
  - · Quality control checks

The HI701 Checker®HC bridges the gap between simple chemical test kits and professional instrumentation. Chemical test kits are not very accurate and only give 5 to 10 points resolution, while professional instrumentation can cost hundreds of dollars and can be time consuming to calibrate and maintain. The Hanna HI701 Checker®HC is accurate and affordable.



HI711 • HI761 • HI771

# Total, Total Ultra Low Range and Ultra High Range Chlorine

Handheld Colorimeters

- Ideal for:
  - Swimming pools and spas
  - Fruit and vegetable sanitation/disinfection
  - · Drinking water

- · Quality control checks
- Environmental
- Hospitality
- Food processing

Chlorine is the most common water disinfectant. The monitoring of chlorine is crucial in applications such as swimming pools and spas, fruit and vegetable sanitation, disinfection and drinking water. By monitoring this crucial parameter, serious health and safety risks can be avoided.

### Specifications HI701

<b>Calibration Set</b>	HI701-11
Reagent Set	HI701-25 (25 tests)
Ordering Information	<b>HI701</b> Checker®HC is supplied with sample cuvettes with caps (2), free chlorine reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.
Method	adaptation of USEPA method 330.5, DPD method
Auto-off	after two minutes of non-use
Light Source	LED @ 525 nm
Accuracy @ 25°C/77°F	±0.03 ppm ±3% of reading
Resolution	0.01 ppm
Range	0.00 to 2.50 ppm

Specifications	HI711 (Total)	HI761 (Total ULR)	HI771 (UHR)
Range	0.00 to 3.50 ppm	0 to 500 ppb	0 to 500 ppm
Resolution	0.01 ppm	1 ppb	1 ppm
Accuracy @ 25°C/77°F	±0.03 ppm ±3% of reading	±5 ppb ±5% of reading	±3 ppm ±5% of reading
Light Source	LED @ 525 nm		
Auto-off	after two minutes of non-use	after ten minutes of n	on-use
Method	adaptation of the Standard Methods for Water and Wastewater, 20th Edition 4500-CI		Standard Methods for Water and Wastewater, 20th
	HI711 Checker®HC is supplied with sample cuvettes with caps (2), total chlorine reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.		
Ordering Information	<b>HI761</b> Checker®HC is supplied with sample cuvettes with caps (2), total chlorine ULR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.		
	<b>HI771</b> Checker®HC is supplied with sample cuvettes with caps (2), Chlorine UHR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.		
Reagent Set	HI711-25 (25 tests)	HI761-25 (25 tests)	HI771-25 (25 tests)
Calibration Set	HI711-11	HI761-11	HI771-11





#### HI749 • HI723

# Chromium VI Low Range and High Range

#### Handheld Colorimeters

- Ideal for
  - · Water quality
  - Environmental
  - Plating
  - Education

The HI723 and HI749 Checker®HC Handheld Colorimeters are a simple, accurate, and cost effective way to measure Cr(VI). Each model is designed for a specific range (low or high) in order to provide high levels of accuracy.

Specifications	HI749 (LR)	HI723 (HR)
Range	0 to 300 ppb	0 to 999 ppb
Resolution	1 ppb	1 ppb
Accuracy @ 25°C/77°F	±2 ppb ±4% of reading	±5 ppb ±4% of reading
Light Source	LED @ 525 nm	
Auto-off	after ten minutes of non-use	
Method	adaptaion of the ATSM, Manual of Water and Enviornmental Technology, D 1687-92, Diphenylcarbohydrazide method	
Ordering Information	HI749 Checker®HC is supplied with sample cuvettes with caps (2), chromiumLR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.  HI723 Checker®HC is supplied with sample cuvettes with caps (2), chromium HR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.	
Reagent Set	HI749-25 (25 tests)	HI723-25 (25 tests)
Calibration Set	HI749-11	HI723-11



## Color of Water

#### Handheld Colorimeter

· 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.

Specifications	HI727
Range	0 to 500 PCU
Resolution	5 PCU
Accuracy @ 25°C/77°F	±10 PCU ±5% of reading
Light Source	LED @ 470 nm
Auto-off	after ten minutes of non-use
Method	adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, Colorimetric Platinum Cobalt method
Ordering Information	HI727 Checker®HC is supplied with sample cuvettes with caps (2), battery, instructions and quick start guide.
Calibration Set	HI727-11





#### HI747 • HI702

# Copper Low Range and High Range

#### Handheld Colorimeters

- Ideal for:
  - · Water Quality
  - $\cdot$  Education
  - Aquarium
  - Wastewater
  - Environmental

The HI747 and HI702 Checker®HC are simple, accurate, and cost effective way to measure high and low ranges of copper. Designed as a more accurate alternative to chemical test kits, the HI747 and HI702 provide quick, accurate results in four easy steps.

Specifications	HI747 (LR)	HI702 (HR)
Range	0 to 999 ppb	0.00 to 5.00 ppm
Resolution	1 ppb	0.01 ppm
Accuracy @ 25°C/77°F	± 10 ppb ± 5% of reading	± 0.05 ppm ±5% of reading
Light Source	LED @ 575 nm	
Auto-off	after ten minutes of non-use	
Method	adaptation of the EPA method	
Ordering Information	HI747 Checker®HC is supplied with sample cuvettes with caps (2), copper LR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.  HI702 Checker®HC is supplied with sample cuvettes with caps (2), copper HR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.	
Reagent Set	HI747-25 (25 tests)	HI702-25 (25 tests)
Calibration Set	HI747-11	HI702-11



#### HI729 • HI739

# Fluoride Low Range and High Range

#### Handheld Colorimeters

· Ideal for water quality

Fluoride is one of the very few chemicals that have been shown to cause significant effects in people through drinking water. Fluoride has beneficial effects on teeth at low concentrations in drinking water, but excessive exposure to fluoride in drinking water, or in combination with exposure to fluoride from other sources, can give rise to a number of adverse effects.

A 1994 World Health Organization expert committee suggested a level of fluoride from 0.5 to 1.0 ppm, depending on climate. Bottled water typically has unknown fluoride levels, and some domestic water filters remove some or all fluoride.

Specifications	HI729 (LR)	HI739 (HR)
Range	0.00 to 2.00 ppm	0.0 to 20.0 ppm
Resolution	0.01 ppm	0.1 ppm
Accuracy* @ 25°C/77°F	±0.10 ppm ±5% of reading	±0.5 ppm ± 5% of reading
Light Source	LED @ 575 nm	
Auto-off	after ten minutes of non-use	
Method	adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, SPADNS method	
Ordering Information	HI729 Checker®HC is supplied with sample cuvettes with caps (2), fluoride LR reagent starter kit (reagents for 5 tests), syringe with tip, battery, instructions and quick start guide.  HI739 Checker®HC is supplied with sample cuvettes with caps (2), fluoride HR reagent starter kit (reagents for 15 tests), syringe with tip, plastic pipette, battery, instructions and quick start guide.	
Reagent Set	HI729-26 (20 tests)	HI739-26 (30 tests)
Calibration Set	HI729-11	HI739-11







# Magnesium and Calcium Hardness

#### Handheld Colorimeters

- Ideal for:
  - Water purification systems
  - · Heating and cooling systems
  - · Drinking water
  - Wastewater

The HI719 Checker®HC is a simple, accurate, and cost effective way to measure magnesium hardness. The HI720 Checker®HC is a simple, accurate, and cost effective way to measure calcium hardness.



### HI718 Iodine

#### Handheld Colorimeter

- Ideal for:
  - Swimming pools and spas
  - · Industrial processes and disinfection

lodine is sometimes used as a disinfectant for swimming pools, spas and potable water. It has also found use as a disinfectant in the poultry industry. The rapid determination of iodine is required for adequate control of this bactericide.

Resolution  O.01 ppm  O.01 ppm  O.01 ppm  O.01 ppm  Accuracy @ 25°C/77°F  Light Source  LED @ 525 nm  Auto-off  Auto-off  Method  Auto-off  Methods for the Standard Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric method  Ordering Information  Information  Ordering Information  Reagent Set  H1719-25 (25 tests)  Reagent Set  O.00 to 2.70 ppm  O.01 ppm  O.01 ppm  O.01 ppm  O.01 ppm  O.01 ppm  O.02 ppm ± 5% of reading  ± 0.20 ppm ± 5% of reading  ± 0.20 ppm ± 5% of reading  # 0.20 ppm ± 0.20 ppm ± 0.20 ppm ± 0.20 ppm ± 0.20	Specifications	HI719 (Magnesium Hardness)	HI720 (Calcium Hardness)
Accuracy @ 25°C/77°F  Light Source  LED @ 525 nm  Auto-off  Auto-off  Auto-off  Method  Auto-off  Methods for the Standard Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric method  Methods for the Examination of Water and Wastewater, 18th edition, Calmagite method  HI719 Checker®HC is supplied with sample cuvettes with caps (2), magnesium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  HI720 Checker®HC is supplied with sample cuvettes with caps (2), calcium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  Reagent Set  HI719-25 (25 tests)  HI720-25 (25 tests)	Range	0.00 to 2.00 ppm	0.00 to 2.70 ppm
Light Source  LED @ 525 nm  Auto-off  after ten minutes of non-use  adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric method  HI719 Checker®HC is supplied with sample cuvettes with caps (2), magnesium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  HI720 Checker®HC is supplied with sample cuvettes with caps (2), calcium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  Reagent Set  HI719-25 (25 tests)  HI720-25 (25 tests)	Resolution	0.01 ppm	0.01 ppm
Auto-off  after ten minutes of non-use  adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric method  HI719 Checker®HC is supplied with sample cuvettes with caps (2), magnesium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  HI720 Checker®HC is supplied with sample cuvettes with caps (2), calcium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  Reagent Set  HI719-25 (25 tests)  HI720-25 (25 tests)		± 0.20 ppm ± 5% of reading	± 0.20 ppm ± 5% of reading
Method  adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric method  HI719 Checker®HC is supplied with sample cuvettes with caps (2), magnesium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  HI720 Checker®HC is supplied with sample cuvettes with caps (2), calcium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  Reagent Set  HI719-25 (25 tests)  HI720-25 (25 tests)	Light Source	LED @ 525 nm	
Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric method  Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric method  HI719 Checker®HC is supplied with sample cuvettes with caps (2), magnesium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  HI720 Checker®HC is supplied with sample cuvettes with caps (2), calcium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  Reagent Set  HI719-25 (25 tests)  HI720-25 (25 tests)	Auto-off	after ten minutes of non-use	
Ordering Information       magnesium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.         H1720 Checker®HC is supplied with sample cuvettes with caps (2), calcium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.         Reagent Set       H1719-25 (25 tests)	Method	Methods for the Examination of Water and Wastewater, 18th edition, EDTA colorimetric	Methods for the Examination of Water and Wastewater,
		magnesium hardness reagent starter kit (reagents for 25 tests), syringes with tips (2), plastic beaker, battery, instructions and quick start guide.  HI720 Checker®HC is supplied with sample cuvettes with caps (2), calcium hardness reagent starter kit (reagents for 25 tests), syringes	
	Reagent Set	HI719-25 (25 tests)	HI720-25 (25 tests)
Calibration Set   Hi719-11 Hi720-11	Calibration Set	HI719-11	HI720-11

Specifications	HI718
Range	0.0 to 12.5 ppm
Resolution	0.1 ppm
Accuracy @ 25°C/77°F	±0.1 ppm ±5% of reading
Light Source	LED @ 525 nm
Auto-off	after ten minutes of non-use
Method	adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, DPD method
Ordering Information	<b>HI718</b> Checker®HC is supplied with sample cuvettes with caps (2), iodine reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.
Reagent Set	HI718-25 (25 tests)
Calibration Set	HI718-11





## HI721 Iron

#### Handheld Colorimeter

- Ideal for:
  - · Industrial ground and treated waters
  - · Mining leachate monitoring
  - · Agricultural irrigation water

About 6.3% of the earth's crust is made of iron, of which 43% is in soils. The analysis of iron is often performed to monitor ground water and irrigation waters as a gauge of corrosion from industrial settling, and as an indication of the effectiveness of treatment from mining leachate.

#### Specifications HI721

Range	0.00 to 5.00 ppm	
Resolution	0.01 ppm	
Accuracy @ 25°C/77°F	±0.04 ppm ±2% of reading	
Light Source	LED @ 525 nm	
Auto-off	after two minutes of non-use	
Method	adaptation of the EPA Phenantroline method 315B, for natural and treated waters	
Ordering Information	HI721 Checker®HC is supplied with sample cuvettes with caps (2), iron HR reagents for 6 tests), battery, instructions and quick start guide.	
Reagent Set	HI721-25 (25 tests)	
Calibration Set	HI721-11	

#### HI709

## Manganese High Range

#### Handheld Colorimeter

- Ideal for:
  - · Water Quality
  - Education
  - · Aquariums
  - Wastewater
  - Environmental

The HI709 Checker®HC is a simple, accurate, and cost effective way to measure high ranges of manganese. Designed as a more accurate alternative to chemical test kits, the HI709 provides quick, accurate results in four easy steps.

#### Specifications HI709 Manganese (HR)

Calibration Set	HI709-11
Reagent Set	HI709-25 (25 tests)
Ordering Information	HI709 Checker®HC is supplied with sample cuvettes with caps (2), manganese HR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.
Method	adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, Periodate method
Auto-off	after ten minutes of non-use
Light Source	LED @ 525 nm
Accuracy @ 25°C/77°F	± 0.2 ppm ± 5% of reading
Resolution	0.1 ppm
Range	0.0 to 20.0 ppm

# Nickel High Range

Handheld Colorimeter

- Ideal for:
  - Steel manufacturing
  - Electroplating and electronics production

Nickel is extensively used in electroplating, the manufacturing of steel, electronic devices, ceramics and colored glasses. It plays a vital role in many processes of applied sciences and fundamental sciences.

Nickel is seldom found in natural waters, but is often present in industrial wastewater as a direct by-product of metal plating baths, and as a corrosion by-product of stainless steel, nickel or cobalt alloys.

#### Specifications HI726 (HR)

Range	0.00 to 7.00 g/L
Resolution	0.01 g/L
Accuracy @ 25°C/77°F	±0.10 g/L ±5% of reading
Light Source	LED @ 575 nm
Auto-off	after ten minutes of non-use
Method	adaptation of the photometric method
Ordering Information	HI726 Checker®HC is supplied with sample cuvettes with caps (2), nickel HR reagents tarter kit (reagents for 6 tests), battery, instructions and quick start guide.
Reagent Set	HI726-25 (25 tests)
Calibration Set	HI726-11





HI764 • HI707 • HI708

### Nitrite Low Range, High Range and Marine Nitrite Ultra Low Range

#### Handheld Colorimeters

- Ideal for:
  - · Aquaculture
- Education
- Water quality

- Aquariums
- Environmental
- Wastewater

Nitrification is the biological oxidation of ammonia (ammonium ion) into nitrite, followed by the oxidation of nitrite to nitrate. The first step of this two-step process is carried out in an aquarium by nitrifying bacteria. During this quick process, the ammonium levels drop while the nitrite levels increase. Since nitrite is just as harmful as ammonia, nitrite levels should be maintained at immeasurable levels. A mature biological filter should be able to keep nitrite levels low.



### HI713 • HI717 Phosphate

#### Handheld Colorimeters

- Ideal for:
  - Aquaculture
  - · natural, waste, agricultural and drinking waters

Orthophosphates are found in natural waters and wastewaters. They are commonly added to drinking water as a corrosion inhibitor. The instantaneous analysis of orthophosphates by colorimetric determination provides rapid results using a standard analysis technique.

Specifications	HI764 (Marine ULR)	HI707 (LR)	HI708 (HR)
Range	0 to 200 ppb NO, -N	0 to 600 ppb NO,	0 to 150 ppm NO;
Resolution	1 ppb	1 ppb	1 ppm
Accuracy @ 25°C/77°F	±10 ppb ±4% of reading	±20 ppb ±5% of reading	±3 ppm ±5% of reading
Light Source	LED @ 525 nm	LED @ 470 nm	LED @ 575 nm
Auto-off	after two minutes of non-use		on-use
Method	adaptation of the EPA Diazotization method 354.1		adaptation of the Ferrous Sulfate method
Ordering	HI764 Checker®HC is supplied with sample cuvettes with caps (2), marine nitrite ULR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.  HI707 Checker®HC is supplied with sample cuvettes with caps		
Information	(2), nitrite LR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.		
	<b>HI708</b> Checker®HC is supplied with sample cuvettes with caps (2), nitrite HR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.		
Reagent Set	HI764-25 (25 tests)	HI707-25 (25 tests)	HI708-25 (25 tests)
Calibration Set	HI764-11	HI707-11	HI708-11

Specifications	HI713 (LR)	HI717 (HR)
Range	0.00 to 2.50 ppm	0.0 to 30.0 ppm
Resolution	0.01 ppm	0.1 ppm
Accuracy @ 25°C/77°F	±0.04 ppm ±4% of reading	±1.0 ppm ±5% of reading
Light Source	LED @ 525 nm	
Auto-off	after two minutes of non-use	after ten minutes of non-use
Method	adaptation of the Ascorbic Acid method	adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, Amino Acid method
Ordering Information	HI713 Checker®HC is supplied with sample cuvettes with caps (2), phosphate LR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.  HI717 Checker®HC is supplied with sample cuvettes with caps (2), phosphate HR reagent starter kit (reagents for 20 tests), battery, instructions and quick start guide.	
Reagent Set	HI713-25 (25 tests)	HI717-25 (40 tests)
Calibration Set	HI713-11	HI717-11





# Phosphorus

#### Handheld Colorimeters

• Ideal for aquaculture

Plants, algae and phytoplankton require phosphorus for nourishment and utilize phosphorous as a component of cell tissue. When organic matter such as plant tissue, dead fish, algae, or uneaten food breaks down aerobically (with oxygen), phosphate is produced, This results in rapid oxygen depletion of aquarium water, which in turn suffocates aquatic life and compounds the problem.

Phosphorus concentration in water is monitored because it causes corrosion when present in levels too high.

Specifications	HI736 (Marine ULR)	HI706 (HR)
Range	0 to 200 ppb	0.0 to 15.0 ppm
Resolution	1 ppb	0.1 ppm
Accuracy @ 25°C/77°F	±5 ppb ±5% of reading	±0.3 ppm ±5% of reading
Light Source	LED @ 525 nm	
Auto-off	after two minutes of non-use	after ten minutes of non-use
Method	adaptation of the Ascorbic Acid method	adaptation of the Standard Methods for the Examination of Water and Wastewater, 18th edition, Amino Acid method
Ordering Information	HI736 Checker®HC is supplied with sample cuvettes with caps (2), marine phosphorus ULR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.  HI706 Checker®HC is supplied with sample cuvettes with caps (2), phosphorus HR reagent starter kit (reagents for 20 tests), battery, instructions and quick start guide.	
Reagent Set	HI736-25 (25 tests)	HI706-25 (40 tests)
Calibration Set	HI736-11	HI706-11



#### HI770 • HI705

## Silica High Range and Low Range

#### Handheld Colorimeter

- · Ideal for:
  - Aquaculture
- Environmental,
- Water quality
   Water treatment

Silica is the name given to silicon dioxide, SiO<sub>2</sub>. 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 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 two water molecules.

Specifications	HI770 (HR)	HI705 (LR)
Range	0 to 200 ppm	0.00 to 2.00 ppm
Resolution	1 ppm	0.1 ppm
Accuracy @ 25°C/77°F	±2 ppm ±5% of reading	±0.03 ppm ±5% of reading
Light Source	LED @ 470 nm	LED @ 610 nm
Auto-off	after ten minutes of non-use	
Method	adaptation of the USEPA method 370.1 for drinking, surface and saline waters and Standard Method 4500-SiO <sub>2</sub> C for domestic and industrial waters	adaptation of the ASTM D859, heteropoly blue method
Ordering Information	HI770 Checker®HC is supplied with sample cuvettes with caps (2), silica HR reagent starter kit (reagents for 6 tests), battery, instructions and quick start guide.  HI705 Checker®HC is supplied with sample cuvettes with caps (2), silica LR reagent starter kit (reagents for 12 tests), battery, instructions and quick start guide.	
Reagent Set	HI770-25 (25 tests)	HI705-25 (25 tests)
Calibration Set	HI770-11	HI705-11

