



Contact us:

Chainaris Phuket Engineering Co., Ltd.

63/13 Moo.2, T.Vichit, A.Muang Phuket 83000

Tel: 076-513100-3 Fax: 076-513105

Line: @chainaris, @chainarissshop

Chemical Test Kits

Bromine, Calcium

HI 3830 Bromine (as Br₂)*

The HANNA portable bromine test kit determines the bromine level in water with efficiency. The first step involves pH adjustment of the sample to pH 6.3 by adding pH buffer. The second step consists of adding the second reagent, an indicator solution which contains DPD (N, N-diethyl-p-phenylenediamine). DPD is immediately oxidized by bromine producing a reddish color. The color intensity of the solution determines the bromine concentration.

HI 38086 Calcium Test Kit for Irrigation Water

The HI 38086 test kit determines calcium in irrigation water via a turbidimetric method. HANNA reagents react selectively with calcium to form a white suspension. The developed turbidity is proportional to calcium concentration.

HI 38080 Calcium and Magnesium Test Kit for Soil & HI 38081 Calcium and Magnesium Test Kit for Irrigation Water

The HI 38081 test kit determines calcium and magnesium in irrigation water via a titrimetric method. The HI 38080 test kit extracts calcium and magnesium from soil in acidic medium and then determines them via a titrimetric method. The indicator chelates with the calcium and magnesium ions to form a red colored complex. As EDTA is added, calcium and magnesium complex with it, and the reaction endpoint is indicated by a change in color of the indicator from red to blue.

ORDERING INFORMATION

HI 3830 test kit comes with 30 mL reagent 1, 20 mL reagent 2, color comparison cube, and plastic vessel.

HI 38086 test kit comes with 30 mL buffer reagent, oxalate reagent (100 packets), 500 mL deionized water, 50 mL glass test tube, 50 mL calibrated vessel, 1 mL plastic pipette, plastic spoon, graduated card and line card.

HI 38081 test kit comes with 30 mL Ca & Mg reagent, 120 mL EDTA solution (2), 10 mL calmagite indicator, demineralizer bottle for 12 L, 50 mL calibrated vessel, 1 mL plastic pipette, 3 mL plastic pipette and 1 mL syringe with tip.

HI 38080 test kit comes with 100 mL buffer solution, 10 mL calmagite solution, 120 mL EDTA solution, 50 mL calibrated vessel, 3 mL plastic pipette, 1 mL plastic pipette and 1 mL syringe with tip.

ACCESSORIES

HI 3830

HI 3830-060 Spare reagent for 60 tests

HI 38086

HI 38086-100 Spare reagent for 100 tests

HI 38081

HI 38081-100 Spare reagent for 100 tests

HI 38080

HI 3841-100 Spare reagents for 100 tests

* No chlorine or iodine can be present in the water sample for this test to work properly.



HI 38081 Calcium and Magnesium Hardness

Bromine is less volatile and more stable than chlorine. This makes bromine a good choice as a disinfectant in pools as well as a sanitizing agent in drinking water systems. Like chlorine, excess amounts of bromine can be hazardous. Daily monitoring of bromine levels prevents adverse conditions and optimizes its proper function.

Calcium presence in water supplies results from passage over deposits of limestone, dolomite, gypsum and gypsiferous shale. Its 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.

Calcium and Magnesium are often present in soil as carbonates (e.g.: dolomite), sulfates (in arid regions) and silicates. They are necessary nutrients for plants since they have an important role in plant metabolism and growth. They can be removed from soil by leaching (for instance in acidic soil of humid regions) or by crop production; a deficiency of calcium and magnesium in soil will manifest itself in stunted growth and in yellow and deformed leaf tips. On the other hand, soil with an excess of calcium and magnesium will lock up other necessary micronutrients, making them unavailable to plant roots (e.g.: available phosphorus forms an insoluble salt with calcium at pH values above 7.5, thus decreasing the efficiency of applied phosphorus fertilizers).

METHOD	RANGE	SMALLEST INCREMENT	CHEMICAL METHOD	# TESTS	WEIGHT
HI 3830 Bromine (as Br₂)					
colorimetric	0.0-3.0 mg/L (ppm)	0.6 mg/L (ppm)	DPD	60 avg.	370 g
HI 38086 Calcium (Ca) of irrigation water					
turbidimetric	0-125 mg/L (ppm) 0-250 mg/L (ppm)	1 mg/L (ppm) 2 mg/L (ppm)	turbidimetric	100	950 g
HI 38081 Calcium (Ca) & Magnesium (Mg) Hardness of irrigation water					
titration	>0.0 meq/L	0.2 meq/L	EDTA	100 avg.	671 g
HI 38080 Calcium (Ca) & Magnesium (Mg) Hardness of soil					
titration	>0.0 meq/100 g	1.5 meq/100 g	EDTA	100 avg.	336 g