



HI 3812 Total Hardness

Water **hardness** has traditionally been defined as the capacity of water to precipitate soap. The ionic species in the water causing the precipitation was later found to be primarily calcium and magnesium. In the present, therefore, water hardness is actually a quantitative measure of these ions in the water sample. It is also now known that certain other ion species, such as iron, zinc and manganese, contribute to the overall water hardness. The measure and subsequent control of water hardness is essential to prevent scaling and clogging in water pipes.

METHOD	RANGE*	SMALLEST INCREMENT	CHEMICAL METHOD	# TESTS	WEIGHT
HI 3812 Hardness (as CaCO₃) Total					
titration	0.0-30.0 mg/L (ppm) 0-300 mg/L (ppm)	0.3 mg/L (ppm) 3 mg/L (ppm)	EDTA	100	460 g
HI 3840 Hardness (as CaCO₃) Total					
titration	0-150 mg/L (ppm)	5 mg/L (ppm)	EDTA	50 avg.	120 g
HI 3841 Hardness (as CaCO₃) Total					
titration	40-500 mg/L (ppm)	20 mg/L (ppm)	EDTA	50 avg.	120 g
HI 3842 Hardness (as CaCO₃) Total					
titration	400-3000 mg/L (ppm)	100 mg/L (ppm)	EDTA	50 avg.	120 g
HI 38033 Hardness (as CaCO₃) Total					
titration	0-30 gpg	1 gpg	EDTA	100	457 g
HI 38034 Hardness (as CaCO₃) Total					
titration	0.0-20.0 gpg 0.0-20.0 mg/L (ppm)	0.2 gpg 0.2 mg/L (ppm)	EDTA EDTA	200	567 g
HI 38035 Hardness (as CaCO₃) Total & Calcium					
titration	Total: 0.0-20.0 gpg Ca: 0.0-20.0 gpg	0.2 gpg 0.2 gpg	EDTA EDTA	200	960 g

* 1 gpg = 17 ppm CaCO₃

HI 3812 Hardness Test Kit

The hardness level as mg/L (ppm) calcium carbonate is determined by an EDTA (ethylene-diamine-tetraacetic acid) titration.

HI 3840 Hardness Low Range Test Kit

The HANNA Test Kit determines total hardness in water via a titrimetric method.

HI 3841 Hardness Test Kit

Medium Range

HI 3842 Hardness Test Kit

High Range

HI 38033 Total Hardness Test Kit

0-30 gpg range

HI 38034 Total Hardness Test Kit

0-20 gpg range, 0-20 ppm range

HI 38035 Total Hardness & Calcium Test Kit

Calcium concentration is determined by an EDTA titration.

ORDERING INFORMATION

HI 3812 test kit comes with 30 mL hardness buffer, 10 mL calmagite indicator, 120 mL EDTA solution, 20 mL plastic beaker with cap, 50 mL plastic beaker with cap and 1 mL syringe with tip

HI 3840 test kit comes with 30 mL hardness LR reagent and 50 mL calibrated vessel.

HI 3841 test kit comes with 30 mL hardness MR reagent and 50 mL calibrated vessel.

HI 3842 test kit comes with 30 mL hardness HR reagent and 50 mL calibrated vessel.

HI 38033 test kit comes with 30 mL buffer solution, 10 mL calmagite indicator, 75 mL EDTA solution (2), 20 mL plastic beaker with cap and 1 mL plastic pipette.

HI 38034 test kit comes with 30 mL buffer solution (2), 10 mL calmagite indicator, 100 mL EDTA solution (0-20 gpg), 100 mL EDTA solution (0-20 ppm), 50 mL calibrated vessel with cap and 1 mL syringes (2).

HI 38035 test kit comes with 30 mL buffer solution, 10 mL calmagite indicator, 100 mL EDTA solution (0-20 gpg), 10 mL calcium reagent A, 10 mL calcium reagent B, 15 mL calcium solution B, 100 mL calcium solution D, 50 mL calibrated plastic vessel with cap and 1 mL syringe with two tips.

ACCESSORIES

HI 3812

HI 3812-100 Spare reagent for 100 tests

HI 740032P Cap for 20 mL plastic beaker (10)

HI 740034P Cap for 50 mL plastic beaker (10)

HI 740036P 50 mL plastic beaker (10)

HI 740037P 20 mL plastic beaker (10)

HI 740142P 1 mL graduated syringe (10)

HI 740144P Tips for 1 mL graduated syringe (10)

HI 38033

HI 38033-100 Spare reagent for 100 tests

HI 740032P Cap for 20 mL plastic beaker (10)

HI 740037P 20 mL plastic beaker (10)

HI 38034

HI 38034-200 Spare reagent for 200 tests

HI 38035

HI 38035-200 Spare reagent for 200 tests