

HI3821 Cooling and Boiler Test Kit



Boilers can be complicated systems to maintain. It seems easy enough that water heats to steam, and that steam provides power. For such a seemingly simplistic operation, care and maintenance can be anything but simple. Proper boiler treatment can prevent or correct a multitude of hazardous and costly situations.

Corrosion can occur in many key areas of a boiler. It can shorten the life of a boiler, or at the very least, increase the costs associated with maintaining a boiler. Corrosion can form in feed water heaters, deaerators, superheater tubes and economizers, among other places. Corrosion is commonly caused by the presence of dissolved gases and low pH.

Corrosion can be debilitating to boiler operation, but it is preventable. In order to effectively prevent or control corrosion, a boiler treatment regimen should include the maintenance of pH levels as well as alkalinity. Together with proper operation, the right boiler treatment chemicals can ward off dangerous corrosion in the critical components of a boiler.

This guarantees the maximum efficiency of the system and prevents costly damage that can occur as a result of corrosion to metal parts.

Hanna's HI3821 combination test kit includes all the necessary reagents to test these parameters. The kit allows you to perform over 100 tests for each parameter, with the exception of phosphate, which includes reagents for 50 tests. All reagent bottles are numerically labeled for ease of operation and to avoid mistakes.

Parameter	Method	Range	Smallest Increment	Chemical Method	# Tests
Alkalinity (as CaCO ₃)	titration	0-100 mg/L (ppm)	1 mg/L (ppm)	phenolphthalein/ bromphenol blue	110 avg.
		0-300 mg/L (ppm)	3 mg/L (ppm)		
Chloride	titration	0-100 mg/L (ppm)	1 mg/L (ppm)	mercuric nitrate	110 avg.
		0-1000 mg/L (ppm)	10 mg/L (ppm)		
Hardness (as CaCO ₃)	titration	0.0-30.0 mg/L (ppm)	0.3 mg/L (ppm)	EDTA	100 avg.
		0-300 mg/L (ppm)	3 mg/L (ppm)		
Phosphate	colorimetric	0-5 mg/L (ppm)	1 mg/L (ppm)	ascorbic acid	50 avg.
Oxygen, Dissolved	titration	0.0-10.0 mg/L (ppm)	0.1 mg/L (ppm)	modified Winkler	110 avg.
Sulfite (as Na ₂ SO ₃)	titration	0.0-20.0 mg/L (ppm)	0.2 mg/L (ppm)	iodometric	110 avg.
		0-200 mg/L (ppm)	2 mg/L (ppm)		
Dimensions	440 x 330 x 100 mm (17.3 x 13.0 x 3.9")				

Ordering Information

HI3821 test kit includes all of the necessary reagents and accessories to perform over 100 tests for every parameter, with the exception of phosphate, which includes reagents for 50 tests, hard carrying case and instructions.

See a list of chemical test kit reagents beginning on page 1.52