

Eclox™ Rapid Response Water Test Kit

Rapid detection of contaminated water
 Reliable indicator of relative water quality
 Easy to use with minimum training
 No refrigeration required for reagents
 Replacement consumables kits
 Used in a wide range of environmental conditions
 Lightweight
 Software provided for data download
 Sensitive to heavy metals, poisons and chemical warfare agents

Features and Benefits

The Hach Eclox Water Test Kit includes tests for:

- Chemiluminescence toxicity screening (Eclox)
- Arsenic
- Pesticide/Nerve Agents
- Chlorine
- Color
- Total Dissolved Solids (TDS)
- pH

Fast, Simple, Toxicity Evaluation

At the heart of the Hach Eclox Water Test Kit is the Severn Trent Services Eclox luminometer for generic identification of the toxicity or purity of a water sample. The technique used by the Eclox luminometer is the same as that validated by the USEPA Environmental Technology Verification (ETV) program to yield reliable detection of heavy metals, poisons, and chemical warfare agents on site. Other tests for specific physical and chemical parameters are provided with the kit. The consumables—enough for 50 tests—are stable for up to two years at ambient temperatures.

Eclox Chemiluminescence Technology

Enhanced chemiluminescence technology is used for convenient toxicity screening in the field to assess trace contamination levels in water. It is based on the reaction of luminol and an oxidant in the presence of a catalyst enzyme—horseradish peroxidase (HRP). The reaction produces a flash of light (chemiluminescence). When an enhancer is added, the light output produced is steady and measurable. A low amount of power is needed by the meter, which has an easy-to-use interface.

EZ Arsenic Test

The Hach Eclox Water Test Kit includes the EZ Arsenic method for simple and rapid arsenic testing. Reagents convert inorganic arsenic in water to arsine. Test strips that are specific for arsine are then allowed to react with the vapor. The color produced on the test strips is proportional to the arsenic content.



The Hach Eclox Water Test Kit targets the recommendations of the USEPA in its emergency response protocols. At the heart of the kit is the innovative Eclox chemiluminescence toxicity method for generic detection of heavy metals, poisons, and chemical warfare agents on site.

Pesticide/Nerve Agent Test

The pesticide test strips in the kit are designed to give a yes/no indication for the presence of cholinesterase inhibiting pesticides such as Organophosphates (OP), Thiophosphates, and Carbamates. It is based on the inhibition of the enzyme Acetylcholinesterase. In the absence of pesticides or nerve agents the strip turns blue. In the presence of pesticides or nerve agents the strip remains unchanged (white). This means that there is a fail-safe built into the strips, in that a malfunction of the strip will not give a false negative.

DPD Chlorine Test

The chlorine test in the Hach Eclox test kit is based on a DPD, color disc method. Reagents for both free chlorine and total chlorine tests are included (50 of each). DPD powder reagent is added to the sample and compared to the color comparator disc. Test range is 0 to 3.5 mg/L chlorine, with 0.1 mg/L increments.

Color Test

The APHA Platinum-Cobalt color test is based on comparison of the sample to a color disc comparator. The range of the test is 0 to 100 Pt-Co units.

Total Dissolved Solids (TDS) Test

A hand-held Pocket Pal TDS Tester is provided in the Hach Eclox test kit. It is waterproof, battery operated, and has a digital display. The unit is calibrated using 90 mg/L standard, included in the kit, and has a range of 10 to 1990 mg/L.

pH Test

pH can be quickly measured using the hand-held, battery operated, waterproof (IP67) Pocket Pal pH Tester. The unit is easily calibrated with the unit-dose Singlet pH buffers included in the kit.

DW = drinking water WW = wastewater municipal PW = pure water / power
 IW = industrial water E = environmental C = collections FB = food and beverage

Distribution Monitoring

DW

WW

E



Homeland Security
Technologies

Specifications*

Dimensions

520 x 450 x 215 mm (20.5 x 17.5 x 8.5 in.)

Weight

9 kg (20 lbs.) fully loaded

Temperature

Tested from -20 to 55°C (-4 to 131°F)

Quality Standards

Manufactured by ISO9000 certified company

Military Standards:

Def Stan 08-41 Chemical hardness

Def Stan 07-55 Robustness

Def Stan 00-35 Environmental conditions

Batteries (for luminometer)

Alkaline cell, lithium cell, AA

Battery Life (for luminometer)

AA batteries: more than 250 tests

Other batteries: more than 2000 tests

Compliance

CE Marked for compliance with European standards

Data Logging (for luminometer)

Up to 60 test results recorded in full detail

Communications (for luminometer)

RS232 cable provided for results download to computer

Software

Database software provided to record and analyze results

Tests

Arsenic; Chemiluminescence toxicity; Chlorine, free and total; Color; APHA Platinum-Cobalt; Nerve agents; Pesticides; pH; Total Dissolved Solids (Conductivity)

Shelf Life

Two years

Storage Conditions

Ambient temperature

Examples of Sensitivity of Chemiluminescent Toxicity Test

Organic		Metallic		Non-Metallic	
phenol	0.1 ppm	copper (sulphate)	1 ppm	(potassium) cyanide	0.01 ppm
aniline	0.05 ppm	mercury (nitrate)	1 ppm		
uric acid	0.001 ppm	lead (nitrate)	5 ppm		
carbofuran	0.5 ppm				

Other Tests in the system have levels of sensitivity of approximately:

Arsenic: 0.01 ppm; Chlorine: 0.1 ppm

Pesticide test strip detection limits (dependent on the specific pesticide present):

Carbamates: 0.1 to 5 ppm; Thiophosphates: 0.5 to 5 ppm; Organophosphates: 1 to 5 ppm

**Specifications subject to change without notice.*

Ordering Information

28868-00 Eclox Water Test Kit, includes consumables, luminometer, batteries, apparatus, and illustrated manual

Consumables

28869-00 Eclox Reagent Set, includes 50 chemiluminescence tests, 10 pesticide/nerve agent tests, 50 each free and total chlorine tests, 10 each pH 4.01 and 7.00 Singlet solutions, 100 EZ arsenic tests

28875-00 Eclox Chemiluminescence Reagent Set, 100 tests

28876-00 Pesticide/Nerve Agent Test Strips, 10 tests

14077-99 DPD Free Chlorine, 50 tests

14076-99 DPD Total Chlorine, 50 tests

27699-20 Singlet Solution Package, pH 4.01 and 7.00, pk/10 each

23075-42 NaCl, Color, and TDS Standards, 100 mL each

28229-99 EZ Arsenic Reagent #1, 100 tests

28230-99 EZ Arsenic Reagent #2, 100 tests

28001-50 Test Strips, Arsenic, 100 tests

Lit. No. 2404

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In the interest of improving and updating its equipment, Hach Company reserves the right to alter specifications to equipment at any time.



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.