

Emergency Response Tool Kit

Based on the USEPA's Response Protocol Toolbox: Planning for and Responding to Drinking Water Contamination Threats and Incidents, Module 4: Analytical Guide*.

Contains key tests recommended by the EPA that are field proven by Hach Company during the last six decades.

Portable laboratory—all key tests are in one package.

Ready for use anywhere in the system.

Simple to use by anybody.

Fast results.



Be ready to respond to water quality emergencies with the Hach Emergency Response Tool Kit. Based on the USEPA's Response Protocol Toolbox,* the kit contains key tests that are recommended by the EPA and field-proven by Hach Company. It's a portable laboratory in one package

Features and Benefits

The Hach Emergency Response Tool Kit includes:

- Free Chlorine Test Kit (Model CN-66F)
- Cyanide Test Kit (Model CYN-3)
- pH Pocket Pal™ Tester
- Conductivity Pocket Pal™ Tester
- Inspector Handheld Surface Radiation Contamination Monitor for alpha, beta, gamma, and x-radiation detection
- Manual that includes information detailing significance of individual tests

Meets Government Agency Recommendations

The Hach Emergency Response Tool Kit is closely modeled after the USEPA's December 2003 recommendations for a core field test kit for drinking water site characterization. It includes a radiation monitor for first-level field safety screening as well as the equipment, reagents, spare parts, and documentation needed to perform the rapid chlorine, cyanide, and pH tests recommended by the agency for characterizing hazards at a particular site. Utilities will find this organized kit, with water quality tests that are easy to learn and use, an efficient and effective way to meet USEPA-recommended preparedness.

Free Chlorine Test Kit, Model CN-66F

The Free Chlorine Test Kit is ideal for quick chlorine testing with a range of 0 to 3.5 mg/L Cl₂. Chlorine is the most widely used disinfectant for drinking water. The Free Chlorine Test Kit includes a color disc and DPD reagent for 100 individual tests.

Cyanide Test Kit, Model CYN-3

The Cyanide Test Kit is perfect for detecting any traces of cyanide that could be potentially hazardous with a range of 0 to 0.3 mg/L CN⁻. The Cyanide Test Kit includes a color disc and Pyridine-Pyrazolone reagent for 100 individual tests.

Pocket Pal pH Tester

Use the pH Pocket Pal Tester for quick, on-site pH testing. This tester is guaranteed to be waterproof and dustproof. It uses Hach color-coded, unit-dose pH buffer singlets, that ensure freshness and eliminate the possibility of contamination.

Conductivity Pocket Pal Tester

The Conductivity Pocket Pal Tester has a range of 10 to 1990 µS/cm. It has a rugged, dustproof and waterproof plastic body, and easy-to-read digital display—perfect for on-site measurement. Prepared sodium chloride solution, included, is required for calibration.

Inspector Handheld Surface Contamination Monitor

The Inspector Handheld Surface Contamination Monitor is a useful tool for checking radiation levels at sites as well as in water. This handheld surface contamination monitor measures alpha, beta, gamma, and x-radiation using a "pancake" GM detector. With an easy to read digital display it can show a wide variety of readings such as mR/hr, CPM, CPS and µSv/hr. Use the total/timer feature to make timed readings for precise measurements of low-level contamination. The anti-saturation circuitry prevents jamming in high radiation fields. Overall, this battery-powered monitor improves safety in laboratories and in the field.

* For more information on the USEPA's analytical guide for a drinking water site characterization field kit, visit: http://www.epa.gov/safewater/security/pdfs/guide_response_module4.pdf.

Designed to Meet USEPA Recommendations

In 2003, the USEPA developed the Response Protocol Toolbox as a planning tool and recommends that it should be integrated into specific emergency response planning activities to effectively manage an actual threat. The EPA recommends that field test kits include field detectors to be used for safety screening or rapid water testing, supporting equipment, reagents, spare parts, and documentation necessary to perform field testing.

The EPA also recommends that test kits be constructed in such a way that they are separate from sample collection kits to keep costs down. The core field test kit should include the equipment necessary to conduct the recommended minimum level of field safety screening and rapid water testing.

The Hach Emergency Response Tool Kit includes a radiation monitor capable of analyzing for alpha, beta, and gamma radiation for field safety screening. Use this monitor to quickly identify radiological hazards or eliminate them from consideration. If levels of radioactivity are detected that pose an immediate risk to life or health, the site would be characterized as a radiological hazard. Without a radiation detector, it may be impossible to determine whether or not the site has been contaminated with radioactive material.

A kit to detect cyanide in water is included to quickly rule out or identify cyanide as a potential contaminant in the water. Most commercially available cyanide test kits are based on either colorimetric or ion selective electrode technologies.

Chlorine residual test kits and pH meters are established technologies that are widely used in the drinking water treatment industry. Chlorine test kits are typically based on colorimetric techniques. pH instruments are based on ion-selective electrodes. Some pH instruments measure conductivity, which is another useful indicator of water quality changes.

These parameters can be used as general indicators of water quality. Deviations from established baseline values may indicate a potential problem.

Other types of detection technology are currently available and might be considered for inclusion in a field test kit. They may provide additional information for characterizing hazards at a particular site or increasing the range of contaminant that can be tentatively identified during rapid field-testing of water. Expanded field-testing might include volatile chemicals, chemical weapons, additional water quality parameters, pathogens, biotoxins, and general toxicity.

Specifications*

Emergency Response Tool Kit

Dimensions: 44 x 26 x 22 cm
(17.5 x 10.25 x 8.5 in.)

CN-66F Free Chlorine Test Kit

DPD, Color Disc
Range: 0 to 3.5 mg/L with ± 0.1 accuracy

CYN-3 Cyanide Test Kit

Pyridine-Pyrazolone, Color Disc
Range: 0 to 0.3 mg/L range with ± 0.01 accuracy

Pocket Pal pH Tester

Range: 0.0 to 14.0 with ± 0.2 accuracy
Operating Temperature: 0 to 50°C
(32 to 122°F)

Pocket Pal Conductivity Tester

Range: 10 to 1990 $\mu\text{S}/\text{cm}$ with
0.02 accuracy
Operating Temperature: 0 to 50°C
(32 to 122°F)

Inspector Radiation Monitor

(see Lit # 2476 for detailed
specifications)

Range: 0.001 to 100.0 mR/hr; 0 to
300,000 CPM; 1 to 9,999,000 total
counts; 0.01 to 1,000 $\mu\text{Sv}/\text{hr}$; 0 to 5,000
CPS with ± 0.15 accuracy

Sensitivity:
3500 CPM/mR/hr referenced to Cs-137

Operating Temperature:
-10 to 50°C (14 to 122°F)

Detector:
Halogen-quenched Geiger-Mueller tube

Display:
4-digit display with mode indicators

Timer & LED Count Light

Audio beeper: can be muted

Outputs: Dual miniature jack drives
CMOS or TTL devices

*Specifications subject to change without notice.

Ordering Information

28841-00 Emergency Response Tool Kit

Test Kit Refills

140779 DPD Free Chlorine reagent,
100 individual 5-mL samples
2438200 Cyanide reagent, 100 tests

pH Buffer Solution

Refills for the pH buffer solution include
20 single packets of 1-mL buffer solution.
27700-20 pH 4.01 buffer solution
27701-20 pH 7.00 buffer solution
27702-20 pH 10.01 buffer solution

Lit. No. 2402

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It's more than ensuring the
quality of water—it's about
ensuring the quality of life.
When it comes to the things
that touch our lives...**

Keep it pure.

Make it simple.

Be right.

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