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H2O2 Field Methods and Test Kits

The table below lists several easy-to-use products for measuring H2O2 residuals in the field. The more appropriate selection will depend on a number of factors including the concentration of H2O2 expected, the potential for interfering substances in the water, and the frequency of analysis. Note that the upper limit of each detection range is somewhat artificial, since higher concentrations of H2O2 may be determined by diluting the sample.

	Test Strips		Test Kits		
Manufacturer	EM Science	Macherey-Nagel	CHEMetrics	LaMotte	Hach
Source	Lab Safety Supply	Scientific Products	CHEMetrics	LaMotte	Hach
Basis	Peroxidase enzyme	Starch-Iodide	Iron Thiocyanate	DPD	Starch-Iodide, Thiosulfate
Method	Color comparison	Color comparison	Ampule color comparator titration	Disk color	Drop count colorimetric comparator
Range, mg/L	0.5-25	3-100	0.05-10	0.1-40	0.2-10
Interferences	None likely or reducing agents	Oxidizing or reducing agents	Oxidizing or reducing agents	Oxidizing or reducing agents	Oxidizing or reducing agents
Ease of Operation	Very easy	Very easy	Easy	Moderate	Moderate
Product Name	Merckoquant Peroxide Test	Quantofix Peroxide	Peroxide Test Kit	Peroxide DPD Tablet	Model HYP-1
Manufacturer No.	10011-1	91312	K-5510	3138	22917-00
Unit	Tube of 100 strips	Tube of 100 strips	30 ampules	Kit of 50 tests, refills available	Kit of 100 tests
Cost	\$41.65	\$22.40	\$50.30	\$32.25	\$40.50
Comments	Semi-quantitative, loses accuracy with age - must be refrigerated	Semi-quantitative, interferences may cause problems	Quantitative, poor sensitivity in lower ranges, interferences are common	Quantitative, poor sensitivity in lower ranges, interferences are common	Quantitative, interferences may cause problems

Manufacturers and Sources

EM Science (division of EM Industries, Inc.). 480 N. Democrat Road, Gibbstown, NJ 08027. (856) 423-6300.

Lab Safety Supply. P.O. Box 1368, Janesville, WI 53547-1368. (800) 356-0783.

Scientific Products (division of Baxter Diagnostics). 1430 Waukegan Road, McGaw Park, IL 60085-6787. (800) 234-5227.

CHEMetrics, Inc. 4295 Catlett Road, Calverton, VA 22016. (800) 356-3072.

Hach Company, P.O. Box 608, Loveland, CO 80539-0608. (800) 227-4224.

LaMotte, Inc. Chestertown, MD 21620. (410) 778-3100.

About USP Technologies

USP Technologies is a leading provider of hydrogen peroxide and peroxide based, performance-driven, full-service environmental treatment programs to help purify water, wastewater, soil and air. We specialize in turn-key solutions for municipal wastewater and drinking water treatment; refinery, gas, oil and petrochemical applications; industrial wastewater and air quality treatment; remediation; and UV-Oxidation.

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