

Combination Outfit

For General Water Analysis

Test Kit Instruction Manual

Code 4783-03

Code 3590-03



COMBINATION WATER OUTFIT

CODE 4783-03
CODE 3590-03

QUANTITY	CONTENTS	CODE
15 mL	*Hardness Reagent #5	*4483-E
50	Hardness Reagent #6 Tablets	4484A-H
60 mL	Hardness Reagent #7	4487WT-H
30 mL	*Iron Reagent #1	*4450-G
4.5 g	*Iron Reagent #2 Powder	*4451-S
30 mL	*Wide Range Indicator	*2218-G
30 mL†	*Sulfide Reagent A	*4458-G
15 mL†	*Sulfide Reagent B	*4459-E
60 mL†	Sulfide Reagent C	4460-H
1	Test Tube, w/cap	4488
1	Spoon, 0.05 g, plastic	0696
4 (6†)	Test Tubes, plastic, 2.5-5-10 mL, w/caps	0106
1†	Pipet, 1.0 mL, plastic	0354
1	Iron Octa-Slide 2 Bar, 0.5-10.0 ppm	4448-01
1	Wide Range pH Octa-Slide 2 Bar, 5.0-10.0 ppm	3483-01
1†	Sulfide Octa-Slide 2 Bar, 0.2-20 ppm	4457-01
1	Octa Slide 2 Viewer	1101

*Reagent is a potential health hazard. **READ SDS:**
lamotte.com. **Emergency information:**
Chem-Tel USA 1-800-255-3924
Int'l, call collect, 813-248-0585



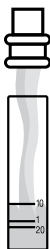
To order individual reagents or test kit components, use the specified code number.

†Code 3590-03 Only

USE OF THE OCTA-SLIDE 2 VIEWER

TOTAL HARDNESS TEST PROCEDURE

1



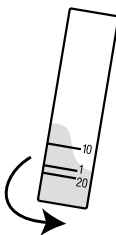
Fill the test tube [4488] to the desired line with the sample water,
upper line: 1 drop = 10 ppm CaCO_3
middle line: 1 drop = 1 gpg CaCO_3
lower line: 1 drop = 20 ppm CaCO_3

2



Add 5 drops
of *Hardness
Reagent #5
[4483].

3



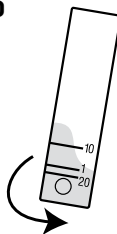
Swirl to mix.

4



Add 1 Hardness
Reagent #6 Tablet
[4484A].

5



Swirl until tablet has
disintegrated. Solution
will turn Red if hardness is
present. Proceed to next
step. If solution is Blue,
there is no measurable
amount of hardness.

6

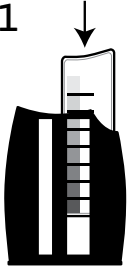


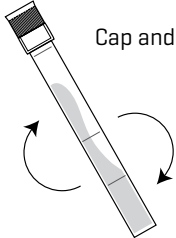
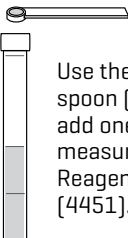
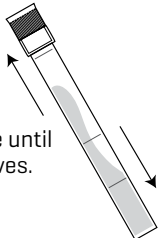

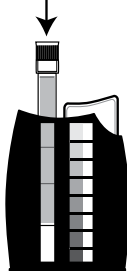
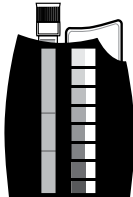


While gently swirling the tube, add Hardness Reagent #7
[4487WT] one drop at a time until the red color changes to blue.
Count the number of drops added. Hold bottle vertically.

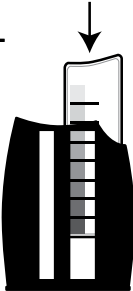
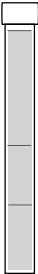

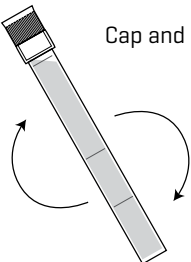
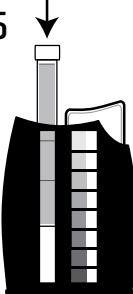
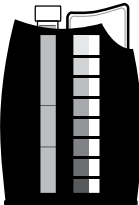
7

Multiply the number of drops used in Step 6 as follows:
upper line: each drop equals 10 ppm Hardness as CaCO_3
middle line: each drop equals 1 gpg Hardness as CaCO_3
lower line: each drop equals 20 ppm Hardness as CaCO_3

IRON TEST PROCEDURE

<p>1</p>  <p>Insert the Iron Octa-Slide 2 Bar [4448-01] into the Octa-Slide 2 Viewer [1101].</p>	<p>2</p>  <p>Rinse test tube [0106] with sample water. Fill to 5 mL line.</p>
<p>3</p>  <p>Add 5 drops of *Iron Reagent #1 [4450].</p>	<p>4</p>  <p>Cap and mix.</p>
<p>5</p>  <p>Use the 0.05g spoon [0690] to add one level measure of *Iron Reagent #2 Powder [4451].</p>	<p>6</p>  <p>Cap and shake until powder dissolves.</p>
<p>7</p>  <p>Wait 3 minutes.</p>	<p>8</p>  <p>Insert test tube into the Octa-Slide 2 Viewer [1101]. Hold the Viewer so that non-direct light enters through the back.</p>
<p>9</p>  <p>Match sample color to a standard. Record results as ppm iron.</p>	

pH TEST PROCEDURE

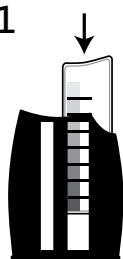
<p>1</p>  <p>Insert Wide Range pH Octa-Slide 2 Bar [3483-01] into the Octa-Slide 2 Viewer [1101]</p>	<p>2</p>  <p>Fill a test tube [0106] to the 10 mL line with sample water.</p>
<p>3</p>  <p>Add 8 drops of *Wide Range pH Indicator [2218].</p>	<p>4</p>  <p>Cap and mix.</p>
<p>5</p>  <p>Insert test tube into the Octa-Slide 2 Viewer [1101]. Hold the Viewer so that non-direct light enters through the back.</p>	<p>6</p>  <p>Match sample color to a color standard. Record results as pH.</p>

TOTAL SULFIDE TEST PROCEDURE

†Supplied only with Code 3590-03

Note: Collect sample with a minimum of aeration and analyze promptly.

1



Insert the Sulfide Octa-Slide 2 Bar [4457-01] into the Octa-Slide 2 Viewer [1101]

2



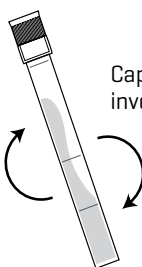
Fill a test tube [0106] to the 5 mL line with the sample water.

3



Add 15 drops of *Sulfide Reagent A [4458].

4



Cap and gently invert to mix.

5



Add 3 drops of *Sulfide Reagent B [4459]. Cap and mix.

6



Wait 1 minute.

7



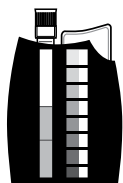
Use the pipet [0354] to add 1.0 mL of Sulfide Reagent C [4460]. Cap and mix.

8



Insert test tube into the Octa-Slide 2 Viewer [1101]. Hold the Viewer so that non-direct light enters through the back.

9



Match sample color to a color standard. Record results as ppm Sulfide.

EPA accepted procedure

A known concentration of sulfide in the range of 0.2-20.0 ppm S^{2-} may be prepared as a check standard by referring to APHA Standard Methods 4500-S2-D, 17th Ed., 1989. Run this test on the check standard. If the result is incorrect, discard the old reagents and order the reagent refill package.



LaMOTTE COMPANY

Helping People Solve Analytical Challenges

802 Washington Ave · Chestertown · Maryland · 21620 · USA
800-344-3100 · 410-778-3100 (Outside USA) · Fax 410-778-6394
www.lamotte.com