SULFIDE TEST KIT

LaMOTTE POMEROY METHOD
MODEL CC-PS • CODE 4630

QUANTITY	CONTENTS	CODE
60 mL	*Sulfide Test Solution #1	*4633-H
60 mL	*Sulfide Test Solution #2	*4634-H
60 mL	*Sulfide Test Solution #3	*4635-H
60 mL	Sulfide Test Solution #4	4636-H
2 x 100 mL	Sulfide Test Solution #4	4636-J
60 mL	*Sulfide Test Solution #5	*4637-S
60 mL	Sulfide Test Solution #6	4638-S
60 mL	*Sulfide Test Solution #7	*4639-H
60 mL	*Sulfide Test Solution #8	*4640-H
1	Pipet, 7.5 mL, glass, w/bulb	0332
1	Pipet, glass, w/cap	0344
2	Pipets, 0.5 mL, plastic	0353
1	Pipet, 1.6 mL, glass	0305
2	Pipets, 0.5 mL, plastic w/caps	0369
4	Test Tubes, Pomeroy, glass, w/caps	0227
1	Bottle, Flocculating, 100 mL, w/stopper	1188

***WARNING:** Reagents marked with an * are considered to be potential health hazards. To view or print a Material Safety Data Sheet (MSDS) for these reagents go to www.lamotte.com. To obtain a printed copy, contact LaMotte by e-mail, phone or fax.

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

TEST RANGE: 0-18 ppm Sulfide. Concentrations above 18 ppm Sulfide will require a sample dilution. Test results should be multiplied by the appropriate dilution factor. Some loss of sulfide may occur during dilution.

TOTAL SULFIDE PROCEDURE

1. Use the 7.5 mL pipet (0332) to add 7.5mL of sample water to each of two test tubes (0227). Mark the test tubes #1 and #2.

NOTE:

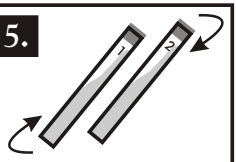
Prevent aeration of the sample by holding the tip of the pipet against the inside wall of the test tube when adding the sample water.

2. Use a 0.5 mL pipet (0353) to add 0.5 mL of *Sulfide Test Solution #1 (4633) to test tube #1.

3. Use the second 0.5 mL pipet (0353) to add 0.5 mL of *Sulfide Test Solution #2 (4634) to test tube #2.

4. Use the glass pipet (0344) to add two drops of *Sulfide Test Solution #3 to each test tube.

5.



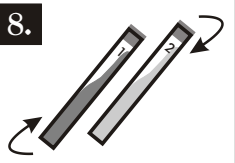
Cap and invert both test tubes several times to mix.

6.

Wait 1 minute. Solution in test tube #1 will turn blue if sulfide is present.

7. Use the 1.6 mL pipet (0305) to add 1.6 mL of Sulfide Test Solution #4 (4636) to each tube.

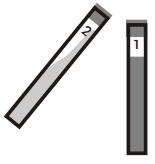
8.



Cap and invert both test tubes several times to mix.

9. Fill pipet with *Sulfide Test Solution #5. Hold pipet vertically. Add one drop to test tube #2.

10.



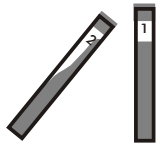
Cap and mix. Compare blue color to test tube #1.

11. Continue adding *Sulfide Test Solution #5 one drop at a time. Cap and mix after each drop. Count the total number of drops needed to approach color of sample in test tube #1. Record as **Value A**.

12.

Fill pipet with Sulfide Test Solution #6. Hold pipet vertically. Add one drop to test tube #2.

13.



Cap and mix. Compare blue color to test tube #1.

14. Continue adding Sulfide Test Solution #6 one drop at a time. Cap and mix after each drop. Count the number of drops needed to match color of sample in test tube #1.

15.

Multiply the total number of drops of Sulfide Test Solution #6 used by 0.1. Record as **Value B**.

16.

Value A+Value B = ppm Total Sulfide

NOTE:

This procedure may be performed using only *Sulfide Test Solution #5 for an approximate reading. The procedure may then be repeated using both solutions for a precise result. With practice it is possible to switch to Sulfide Test Solution #6 before color match occurs.

DISSOLVED SULFIDE PROCEDURE

1. Fill amber flocculating bottle (1188) completely by allowing sample to overflow the bottle and then stoppering.
2. Use the 0.5 mL pipet (0369) to add 0.5 mL *Sulfide Test Solution #7 (4639).
3. Use the 0.5 mL pipet (0369) to add 0.5 mL *Sulfide Test Solution #8 (4640). Stopper bottle, being careful to exclude all air bubbles. Invert rapidly for one minute to flocculate sample. Wait 15 minutes.
4. Use clear liquid in flocculating bottle. Following Steps 1-16 of the Total Sulfide test procedure to test for dissolved sulfide. Record result as ppm Dissolved Sulfide.

HYDROGEN SULFIDE PROCEDURE

1. Measure pH of test sample.

   NOTE: Reagents or apparatus for determining pH are not included in this kit but may be ordered from LaMotte Company.

2. Use Dissolved Sulfide test procedure to determine dissolved sulfide concentration.

3. Refer to graph below to determine the proportions of H_2S and HS in dissolved sulfide.

pH Correction Factors for Hydrogen Sulfide Determination

pH	Factor	pH	Factor	pH	Factor	pH	Factor
5.0	0.98	6.4	0.67	7.3	0.20	8.4	0.020
5.2	0.97	6.5	0.61	7.4	0.17	8.6	0.012
5.4	0.95	6.6	0.56	7.5	0.14	8.8	0.0079
5.6	0.93	6.7	0.50	7.6	0.11	9.0	0.0050
5.8	0.89	6.8	0.44	7.7	0.091	9.2	0.0032
6.0	0.83	6.9	0.39	7.8	0.073	9.4	0.0020
6.1	0.80	7.0	0.33	7.9	0.059	9.6	0.0013
6.2	0.76	7.1	0.28	8.0	0.048		
6.3	0.72	7.2	0.24	8.2	0.031		

4. Multiply dissolved sulfide level by the pH correction factor. Record as ppm Hydrogen Sulfide.

ppm Hydrogen Sulfide (H_2S) =
ppm Dissolved Sulfide x pH Correction Factor

TEST EQUIPMENT CARE & MAINTENANCE

1. Carefully wash and rinse all apparatus after each use.
2. Tighten reagent container caps immediately after use. Do not interchange caps.
3. Avoid prolonged exposure of test components to direct sunlight.
4. Avoid extreme high temperatures and protect components from freezing.
5. Keep reagent containers out of reach of young children.

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