

SULFATE REDUCERS TEST SET



DESCRIPTION

The Sulfate Reducers Test Set determines the presence of anaerobic bacteria (*desulfovibrio desulfurican*) that are found in the water layer at the bottom of fuel tanks. These bacteria do not grow in the presence of oxygen so the agar in the test tubes and the procedure is specially designed to eliminate oxygen.

Bacteria can rapidly multiply in the water layer of contaminated fuel. They feed on the oil often producing a slime or “rag” layer which will clog filters and lines. The test sample must be taken from the water layer with as little oil contamination as possible. Any oil must be removed from the sample surface using a dropper pipette before proceeding to test for sulfate-reducing bacteria.

The kit provides all the materials required for 25 tests. It should be stored in a cool environment, such as an air-conditioned control room, to maximize the shelf life.

APPLICATION & USE

This test kit can be used on any water sample which may support the growth of anaerobic bacteria, such as those contaminating fuel tanks. It should be used in conjunction with the Biological Dual Assay slides for a complete biological test of any water where oxygen presence is questionable.

PROCEDURE

1. Gather a sample of the water to be tested. Using the tweezers provided, take a sterile applicator from the packet and insert into the sample water.
2. Uncap the tube of agar and insert the inoculated applicator into the tube. Center the applicator, and with as little lateral movement as possible, push the applicator into the agar so that it is even with the top of the tube.
3. Using a toothpick as a ramrod, push the applicator to the bottom of the tube of agar. Discard the toothpick.
4. Add several drops of mineral oil to the tube, enough to cover the surface of the agar.
5. Place the inoculated tubes in any location where the temperature will be between 30o and 35o C for 3-7 days. The tubes may be placed in a non-air conditioned room or close to a radiator. A minimum of three days is required, but results should not be considered negative until the seventh day.



Sulfate Reducers Test Set (PCN 1707019)

Interpretation of Results (Sulfate Reducers/ml)

Tube Appearance	Days of Incubation				
	1	2	3	4	5
Completely black	>10 ⁶	>10 ⁵	>10 ⁴	>10 ³	>10 ²
Narrow zone of black around applicator center	10 ⁵	10 ⁴	10 ³	10 ²	10 ¹
No reaction	<10 ⁵	<10 ⁴	<10 ³	<10 ²	<10 ¹

Interpretation of Quantitative Results

Sulfate Reducers/ml	Interpretation
10 ⁵ (100,000) or more/ml	Heavy
10 ³ –10 ⁴ (1,000-10,000)/ml	Moderate
10 ² -10 ³ (100-1,000)/ml	Low
10 ¹ –10 ² (10-100)/ml	Very Low
10 ¹ (10) or less/ml	Generally Insignificant



Contact your Drew Marine representative for more information

Drew Marine maintains Safety Data Sheets on all of its products. These documents contain health and safety information for the development of appropriate product handling procedures to protect your employees. Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Drew Marine products.



Drew Marine®

**100 South Jefferson Road
Whippany, NJ 07981 USA
1-973-526-5700
Drew-Marine.com**

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