

Sulphate Reducing Bacteria Test

The Sulphate Reducing Bacteria (SRB) Tube Test is designed to assess the contamination of water samples with sulphate reducing bacteria. The test contains a straw coloured medium which reacts to the production of hydrogen sulphide to give a semi-quantitative result after 5 days. The SRB Tube Test is used specifically to indicate the presence of bacteria, which under the correct conditions, are able to produce hydrogen sulphide. Hydrogen sulphide is a colourless gas which is extremely corrosive to ferrous and non-ferrous metals. This can lead to holes in water systems and leaks in tankers by dissolving the surrounding metal.

SAMPLING

Pipette 2 ml of the sample into the tube and immediately replace cap and place upright in incubation. For testing corrosion pits swab them with a sterile swab, pierce the gel with the swab and place into incubation. Contamination is defined by blackening around the swab.

INCUBATION

Incubate at 35°C for up to 5 days, check daily to determine the level of contamination.

DISPOSAL

Used tests should be incinerated or autoclaved. Alternatively, open and immerse in a 10% bleach solution for 24 hours.

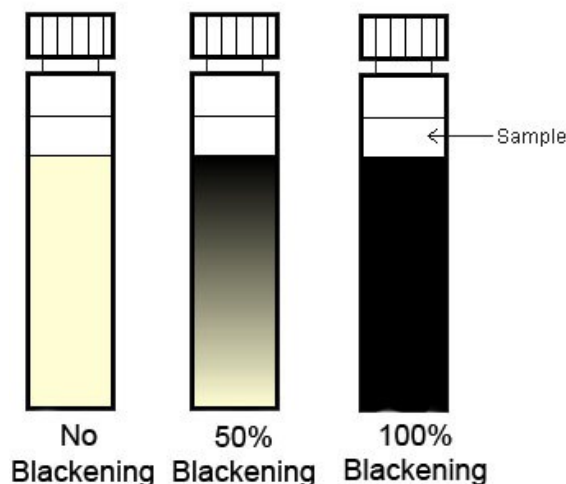
CLASSIFICATION OF RESULTS

Results are determined by the spreading black precipitation from the inoculation point through the agar. When testing samples already high in sulphide there may be a sudden blackening of the medium. In which case contamination can be judged by the advancement of the blackening further into the medium.

INTERPRETATION OF RESULTS

As noted the recommended incubation time for this test is up to 5 days. Indication of the level of contamination can best be obtained by daily checking of the incubated tubes. On a daily basis assess the percent (%) blackening in each incubated tube. Record the percent blackening and the associated no. of days incubated. The degree of contamination is assessed by how much blackening occurred and the rate at which it occurred (i.e. No. of days).

<u>Less than 1 Day Incubation</u>		<u>1 Day Incubation</u>	
Blackening	Contamination	Blackening	Contamination
Noticeable	= Heavy	0	None
		10 to 25%	= Moderate
		26 to 100%	Heavy
<u>2 Days Incubation</u>		<u>3 to 5 Days Incubation</u>	
Blackening	Contamination	Blackening	Contamination
0	None	0	None
10 to 50%	= Moderate	1 to 25%	= Low
51 to 100%	Heavy	26 to 100%	Moderate



Storage
Tests have a shelf life of 9 months when kept in a cool dry environment between 10 to 15°C

Disclaimer

It is difficult to assess the absolute number and nature of contamination and corrosion using a single test. The validity of the sample and the sample point can affect the test results obtained. DTK water therefore accepts no liability on any action taken as a consequence of information gained through the use of DTK Water SRB Tube Tests. All accompanying information provided is in good faith and based on the experience of DTK water in the water treatment industry.