

NRB TUBE INSTRUCTION GUIDELINES

PN: 568699

The NRB (Nitrite-Reducing Bacteria) test kit is used onboard vessels to detect denitrifying bacteria in cooling water systems. These bacteria, if undetected, can consume nitrites essential for corrosion protection, compromising the system's integrity. Regular monitoring with the NRB kit is crucial to prevent corrosion, ensuring the longevity and efficiency of the vessel's cooling system.

NRB Tube Test (pack of 10)

This tube test allows you to measure anaerobic bacteria and detect microbiologically induced corrosion. The agar contains a semi-solid medium designed for analyzing anaerobic microorganisms capable of nitrite ammonification.

Instructions for use	
Step 1 – Sampling	Take 2 ml of sample liquid with a pipette and place the sample in a test tube.
Step 2 - Incubation	Then incubate at 35°C for up to 5 days with daily controls.
Step 3 – Results	The results are determined by the colour change – Pale orange medium reacts to bacterial metabolism. If no colour change or only bubble formation is visible, there is no contamination.
To be used with:	777930 – PORTABLE INCUBATOR

CLASSIFICATION OF RESULTS

- No colour change and no bubble formation indicates no contamination.
- A partial colour change—where the top layer of the medium turns red while the bottom remains pale orange—together with moderate bubble formation, indicates moderate contamination.
- A complete colour change throughout the medium, accompanied by significant bubble formation, is indicative of heavy NRB contamination.
- Strongly acidic or alkaline samples may cause an immediate colour change unrelated to microbial activity. In such cases, contamination should be confirmed by bubble formation alone.

After Incubation at 35°C

No. Cfu/ml	Day 1	Day 2	Day 3	Day 4	Day 5
10 ⁹	√√√√√	√√√√√	√√√√√	√√√√√	√√√√√
10 ⁸	√√	√√√√√	√√√√√	√√√√√	√√√√√
10 ⁷	√	√√√√√	√√√√√	√√√√√	√√√√√
10 ⁶	√	√√√	√√√√√	√√√√√	√√√√√
10 ³⁻⁵		√	√√√	√√√√√	√√√√√
10-100			√√√	√√√√√	√√√√√

Key:

- Full colour change and many gas bubbles
- 75% colour change and many gas bubbles
- 50% colour change and few bubbles
- 25% colour change and few bubbles
- 0-25% colour change and few bubbles
- No colour change and no bubbles

√√√√√
√√√√
√√√
√√
√
√



No HRB Present



Moderate Contamination



Heavy Contamination

Sample

Bubble

Storage:

- Tests have a shelf life of 9 months when kept in a cool dry environment. Preferably between 10-15°C.

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