FAQ

MICROBIOLOGICAL GROWTH: MEDIA TEST KITS
FREQUENTLY ASKED QUESTIONS & USEFUL INFORMATION

Insight into Intertek's versatile testing solution for a wide range of industries

Our media test kit is a robust and reliable microbiology testing solution for a variety of industries, including oil & gas, wastewater treatment and energy storage.

Intertek's media test kit is designed for implementation of the MPN (most probable number) testing method to detect and quantify problematic organisms (SRB, NRB, APB, etc). This can be applied to a range of planktonic (process water, cooling water) and sessile (coupons, swabs, debris) samples.

To enhance and improve your experience with this field-ready test method, we have listed our most FAQs which contain helpful guidance for successful use.

Q. How does the MPN test work?

A. The MPN method has been used since the early 1900s and to this day offers a reliable and simple testing solution. It is a culture-based method which uses a specially-formulated medium broth to selectively grow target organisms. Using a dilution series, we can accurately calculate the number of microorganisms present in a sample.

Q. Is MPN an easy test to use?

A. The MPN test method is probably the easiest and most accessible method of detecting and quantifying actual growth of harmful microbes. You only need a few consumables and a small workspace – no expensive machines or prior microbiology knowledge/training necessary. Using a simple instruction sheet the test takes minutes to perform.

Q. Can this be used on an oily or waxy sample?

A. Yes, this test method can be used on most sample types. If your sample is composed of organic material, such as hydrocarbons, which makes it immiscible with water, we suggest you perform a simple and quick washing procedure (requiring some additional consumables), as detailed in AMPP (NACE) TM0194, to extract any microbiological material present. Ask us for guidance on this.

Q. Can you perform replicate testing using MPN?

A. Yes. We strongly recommend performing this test in triplicate to achieve reproducible data. This can easily be performed using two boxes of media with a triplicate, 8-series dilution technique.

Q. How do I know if the sample contains harmful organisms?

A. Once the sample has been processed, a positive result is often indicated by a simple colour change (e.g. clear to black) and/or an increase in turbidity (clear to cloudy). This shows the user that microbes are actively growing in the media kit bottles.

Q. What result does MPN testing with a media kit provide?

A. The industry-wide accepted unit for determining microbiological growth is cells per ml/g/cm^2. The MPN method relies on a series of positive and/or negative bottles which are counted to provide a logarithmic cells per sample count. For example, 9.5 x 10^2 cells/ml for a planktonic sample and 1.5 x 10^4 cells/cm^2 for a sessile (corrosion coupon) sample.

For more information or any other questions, please contact us.

FOR MORE INFORMATION

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