

Bacteria Test in Diesel treated with Xp³D **Evaluation of Xp³D as a biocide and its** **effectiveness in treating contaminated Diesel**

TEST LAB

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BACKGROUND

Xp³D, the diesel fuel treatment, works as an effective biocide capable of treating contaminated fuel, and prevents the growth of new bacteria. For treatment of highly contaminated fuel, Xp Lab recommends the use of our highly effective biocide (Xp³D-Bio).

OBJECTIVES

A test was conducted by FOI Laboratory to determine if the use of Xp³D applied to known microbial positive fuel would eliminate the existing contamination.

TEST PROCEDURE

- FOI Lab provided a sample of microbial positive fuel
- The fuel was treated with Xp³D in a proportion of 1 part of Xp³D for each 4000 parts of the fuel
- The treated fuel was tested using the ASTM D7687/E2694 to determine if the use of Xp³D applied to the known microbial positive fuel would eliminate the contamination

TESTING METHOD

The ASTM D7687 Standard Test Method is used to Measure of Cellular Adenosine Triphosphate in Fuel, Fuel/Water Mixtures, and Fuel-Associated Water with Sample Concentration by Filtration. This test method measures the concentration of cellular-ATP present in the sample. ATP is a constituent of all living cells, including bacteria and fungi. Consequently, the presence of cellular-ATP is an indicator of total metabolically active microbial contamination in fuels. This test method covers a protocol for capturing, extracting and quantifying the cellular adenosine triphosphate (cellular-ATP) content associated with microorganisms found in fuels, fuel/water mixtures and fuel-associated water.

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LAB TEST RESULTS



This test method detects ATP concentrations in the range of 5.0 pg ATP/mL (0.699 log₁₀[pg ATP/mL]) to 100 000 pg ATP/mL (5.000 log₁₀[pg ATP/mL]) for 20 mL samples of fuel or fuel/water mixtures, and 20 pg ATP/mL (1.301 log₁₀[pg ATP/mL]) to 400 000 pg ATP/mL (5.602 log₁₀[pg ATP/mL]) for 5 mL samples of fuel-associated water.

RESULTS

The test result showed that the contaminated fuel treated with Xp³D came back with undetectable microbial growth. See enclosed report LABV7023542

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