



Microbial Field Test Instructions

For the detection of microbial growth in diesel, biodiesel, fuel blends, jet fuel, heating oil, and kerosene

Instructions:

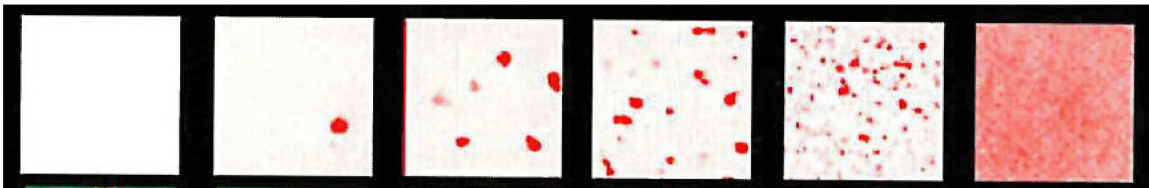
Background info on reverse side

Note: When handling test strips, try to limit touching the pad surface by holding the test strip near the label.

1. Obtain your fuel sample from vehicle, storage tank or filler nozzle.
2. Remove test strips from ziplock bags (save bags), labeled Bacteria and Yeast and Mold.
3. Use dropper and water in small vial to moisten the pad end on the test strip.
4. Dip pad end of test strip into fuel sample for 5-10 seconds.
5. Remove strip from sample and gently shake off excess fuel.
6. Place test strips back in separate small ziplock bags for incubation. Seal the bags.
7. Store the bags in a warm place (75° - 85° for best results) for 36 - 72 hours.

Interpret the results as indicated below.

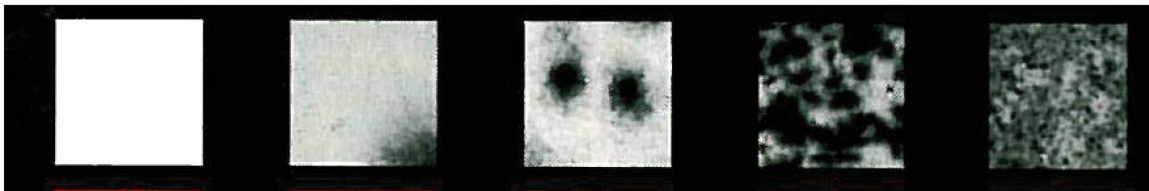
Bacterial Contamination Chart



Read results after 24 - 36 hours

PASS ---> <--- **FAIL**

Yeast and Mold Contamination Chart



Read results after 24 - 36 hours

PASS ---> <--- **FAIL**

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Yeast and mold test strips
Bacteria test strips
Test tube with distilled water
Dropper

BACKGROUND

Microbial growth in fuel will often lead to serious problems. Fungal (yeast and mold) and bacterial growth problems include corrosion, slime formation, filter plugging, and general decreases in performance and function, all potentially leading to down time and expensive repair of equipment. Preventative measures and effective biocide treatment are possible only if the degree of contamination is routinely determined. Fleet Fuel Testing's Microbial Field Test makes it fast and easy to monitor yeast, mold, and bacterial count. While microbial growth is often referred to as "algae", true algae does not grow in fuel. Our tests detect the most common and problematic microbial contaminants.

Our kits contain flexible plastic dip-strips, complete and ready to use. You simply wet the pad at the end of the strip with water, dip the strip in your fuel sample, and incubate the strip in the included zipper pouch.

Our Bacteria test strip is for Aerobic Bacteria. Most bacteria that contaminate the industrial environment are in this category and will grow on our test strips. Examples of these are included in the genera of *Pseudomonas*, *Enterobacter*, *Escherichia*, *Klebsiella*, *Flavobacterium*, and *Alcaligenes*, to name a few.

Our Yeast and Mold test strip is for fungal growth. Our test is able to detect a broad range of these microbes which are implicated in contamination of the industrial environment. Examples of yeasts are included in the genera of *Candida*, *Trichosporon* and *Saccharomyces*. Examples of molds are included in the genera *Fusarium*, *Cephalosporium*, *Cladosporium*, *Aspergillus*, and *Penicillium*.

The number of spots on the test strip can be used to derive a quantitative measurement of microbial growth. Following incubation, the strip is compared to a color chart. The value obtained from the chart allows for an estimated microbial count to be made. Failure indicates microbial counts in the 100,000 to over 1,000,000 counts per gallon. Our tests are a dehydrated product and are thus quite stable. They require no refrigeration, and have a room temperature shelf life of two years.

Disclaimer and Warranty

All Fleet Biodiesel and Fleet Fuel Testing Field and Lab Tests are offered only as general indicators of fuel quality. All commercial tests – even analytical tests performed according to ASTM specifications – are subject to error due to sampling techniques, unique fuel attributes, and statistical anomaly. Failed test should be verified by repetition or more detailed analytical testing. No warranties, either expressed or implied, are made regarding the accuracy of the tests or the quality of fuel that is tested.

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