

RAPID DETECTION OF MICROBIAL CONTAMINATION IN FUEL

Transportation



Road & Rail Transportation Microbial Fuel Contamination

- Does your fuel contain dangerous levels of contamination?
- FUELSTAT® can quickly help you find out!

With modern engines becoming more finely tuned to meet strict controls on emissions and as such more friendly to the environment, many are suffering higher levels of fuel system issues. The reductions in Sulphur and introduction of bio-content has had an impact on the ability of organisms (Diesel Bug) to thrive and as such is resulting in higher numbers of unplanned maintenance and unscheduled downtime of assets.

Microbial contamination can be very damaging to any operation if left unmonitored so whether rail or road, keeping your fleet at optimal efficiency is good for business. Imagine therefore if your fuel depot has a contamination issue, you could potentially be transferring this to each asset, every time they refuel.



Can you guarantee that any contamination is not passed by a fuel supplier?

Can a fuel supplier guarantee the cleanliness of supply from a tank or tanker, or pipeline? The further down the supply chain you go post the sanitary environment of the refinery, the more susceptible an operation is and therefore testing is becoming increasingly important for all areas of the supply chain to ensure quality and aid efficient preventative maintenance programs to be undertaken.

Diesel “bug” microbial contamination creates a slime called a biofilm or biomass that can induce several issues. If left for a prolonged period of time without treatment, it can cause:

- Blocked filters
- Increased injector wear
- Increased fuel consumption
- Fuel starvation
- Less efficient engine operation
- Engine failures
- Corrosion and tank leakage

Is sending samples to a lab for microbial fuel tests worthwhile or economical?

Traditionally, diesel fuel testing methods have depended on fuel samples being sent to a specialist laboratory for analysis. The next step is a waiting period of up to 10 days to get the results.

Sending the fuel samples to the lab isn't simple. ASTM D6469 highlights that if a sample is to be tested for microbial contamination and cannot be tested on-site, it should be transported on ice and tested within 24hrs or the sample may no longer be a true representation of the environment from which it came. Delays cause varying results which may cause an increased risk to your asset.

Why take the risk?...
FUELSTAT® solution
Test. Result. Report
within 15 minutes



FUELSTAT® Plus

- Ultra simple test that requires **4 drops** of sample
- **15 minutes** to result as opposed to 4-7 days!

FUELSTAT® is based on immunoassay technology, which is widely used in the medical industry to rapidly and accurately detect such things as pregnancy, prostate cancer and hypoglycaemia. Put simply FUELSTAT® only searches for the specific micro-organisms that are known to thrive and do damage in diesel and jet fuel.

FUELSTAT® is simple to use and learn with little that can go wrong on-site, simply add the sample to the bottle provided with the test kit, shake it, place 4 drops onto a piece of tissue to remove any fuel or particles trapped in the nozzle before adding 4 drops to each of the sample wells on the test paddle and wait 10 minutes for the results to appear. FUELSTAT® requires little instruction and little in way of rigid sterility controls except for a clean sampling jar. The components of the test kit are also recyclable; however, the fuel sample must be disposed of as per each individual organisation's own protocol.



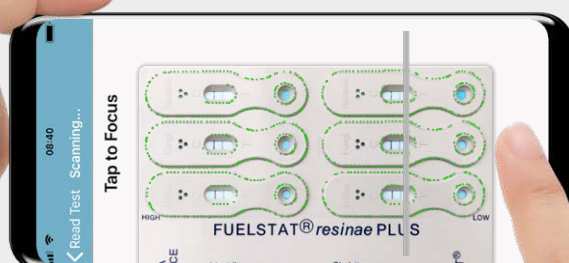
FUELSTAT® Result

- Reduces risk of misinterpretation
- Immediate visual verification of result
- No need for additional equipment other than a smartphone
- Fully detailed report can be instantly produced in PDF format

If you want instant verification of the result which can be sent to or received by Headquarters within minutes, then the free to download app, FUELSTAT® Result, will tell you in seconds on your smartphone device.

FUELSTAT® Result will also enable a fully transparent and traceable audit trail to track trends and hotspots, but also provide accurate information to enable effective and more cost-efficient maintenance programs to be undertaken. It may also assist in identifying assets which are more susceptible to microbial contamination, thus aiding increased risk management, provide greater warranty protection against fuel related issues and more importantly reduce potential downtime of assets

Over 100,000 FUELSTAT® tests are used every year all over the globe in many highly regulated industries to monitor microbial contamination in middle distillate fuels. It is compliant with the ASTM D8070 International Standard and is used by organisations the world over from airlines to major fuel operators, from militaries to data centres to keep assets protected.



FUELSTAT® ANALYSIS REPORT															
Company name: Standard Address Inputted From Portal/Registered User: Engineers Name															
Address: Input from Portal/Registered Address	Test date: 24-JAN-2019														
Post code: From Portal	GPS location:														
Country: United Kingdom	Fuelstat result number: 3,361														
Customer reference: 124 - Portal Template	Printout date: 24-JAN-2019														
Identity: Example Test	Bacteria: Negligible														
Asset: Jet 1	Fungi: Heavy														
Tank: Wing	Hormoconis resiniae: Negligible														
Fuel lot: 4	Overall result: Heavy														
Fuelstat test lot: HR 2 411	Test method: ASTM D8070-16														
<p>Interpretation and guidance</p> <table border="1"> <thead> <tr> <th>Phase</th> <th>Target antigen limits</th> </tr> </thead> <tbody> <tr> <td>Fuel</td> <td>Up to 33 µg/l</td> </tr> <tr> <td>Water</td> <td>Up to 33 µg/l</td> </tr> <tr> <td>Fuel</td> <td>Between 150-750 µg/l</td> </tr> <tr> <td>Water</td> <td>Between 150-750 µg/l</td> </tr> <tr> <td>Fuel</td> <td>Greater than 750 µg/l</td> </tr> <tr> <td>Water</td> <td>Greater than 750 µg/l</td> </tr> </tbody> </table>		Phase	Target antigen limits	Fuel	Up to 33 µg/l	Water	Up to 33 µg/l	Fuel	Between 150-750 µg/l	Water	Between 150-750 µg/l	Fuel	Greater than 750 µg/l	Water	Greater than 750 µg/l
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<p>Portal version: 1.2.2</p> <p>Analysis approved by:</p>															

find out more:
www.conidia.com



FUELSTAT®

Who we are:

FUELSTAT® fuel tests are developed, manufactured and marketed by Conidia Bioscience Limited. Based in UK, Conidia Bioscience Limited was founded in early 2000's by experts in immunoassay techniques and holds the internationally patented intellectual property for FUELSTAT®.

Where to find us:

FUELSTAT is distributed globally by a network of specialist distributors covering the major sectors. Contact info@conidia.com who will arrange for a distributor to support you.



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