

# BUSINESS AND GENERAL AVIATION

Jet fuel microbial contamination can be extremely costly to aviation businesses. Identify and deal with the issue at earliest possible stage

**TRIED. TESTED. TRUSTED.**

**FUELSTAT®** provides simple rapid detection of microbial contamination in jet fuel with free digital app to verify results and capture data





## Avoiding unscheduled Aircraft on Ground (AOG) can be very good for business and reputation

Traditionally, jet 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 4-7 days, or longer 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 may cause varying results which may cause an increased risk to your asset and require unscheduled AOG to remove the contamination.

- Why take the risk?...
- Why wait 4-7 days for a test report?

Applying an additive like biocide on a regular basis is another solution commonly used in aviation to prevent microbial contamination. The risk is that a fresh contamination starts before the next scheduled application of biocide and grows rapidly and that the contamination micro-organisms develop resistance from regular exposure to biocide, much as a human does with antibiotics.

- Is the cost and effort of applying additives regularly justified?
- Would fast on-site testing be a more efficient option?

**FUELSTAT® SOLUTION**  
**TEST. RESULT. REPORT**

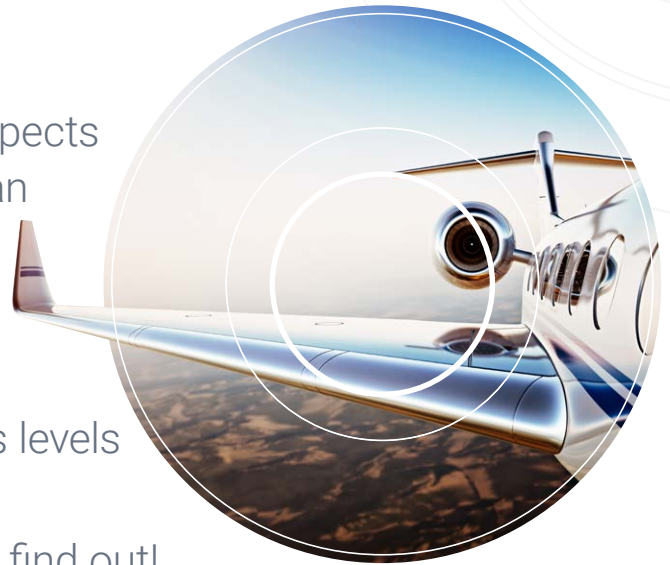
**within 15 minutes**



## BA/GA FUEL MANAGEMENT

FUELSTAT® Microbial Contamination Detection: A modern solution for all aspects of managing fuel. All contamination can impact the quality of aviation jet fuel, microbial contamination is the most troublesome.

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

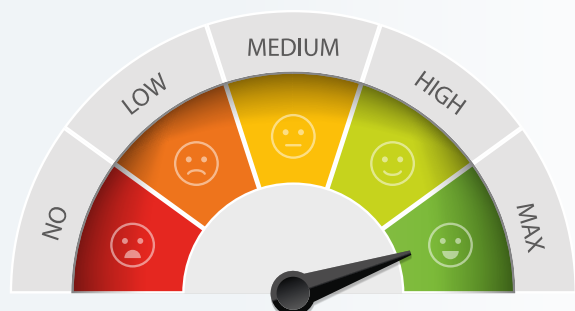


FUELSTAT® uses antibody technology as against more traditional growth techniques. It works equally well testing fuel only as well as water in fuel, only searches for the markers of microbial contamination so risk of false high results are reduced, is simple with no previous experience in testing required, and very fast with results from start to finish in less than 15 minutes. It also comes with a free data capture app FUELSTAT® Result.

## Tough markets demand efficient processes that are not always visible to clients

Customers demand instant availability, reliability, service, comfort at a fair and competitive price. Operators want the highest level of uptime, highest reputation and returning clients. Operators also want to protect their assets to maintain the highest value. Reducing the risk of fuel microbial contamination helps with both operational risks and structural risks from corrosion that can be influenced by microbiological growth in fuel tanks.

- FUELSTAT®, taking only a few moments of labour to complete and interpret, is very cost effective
- FUELSTAT® helps understand the condition of fuel tanks based on knowledge, not guesswork, helping reduce risk of unexpected downtime
- FUELSTAT® helps with decisions to only treat with additives when necessary, reducing cost, downtime and overuse considerations



CUSTOMER SATISFACTION



# MICROBIAL CONTAMINATION IN JET FUEL

What is aviation fuel microbial contamination, why is it so costly and vital to identify?

Fuel microbial contamination is caused by microbes: tiny organisms such as bacteria, yeasts and fungi, which thrive wherever there is food and water. Aviation fuel systems are ideal habitats for these organisms. Not only are these systems often warm and humid, but they also provide food for microbes in the form of hydrocarbons that are in the fuel.

If these microbes (also known as 'bugs') are allowed to proliferate unchecked, they can block fuel filters and cause fuel gauging problems. In fact, they can even induce corrosion to such extent that they can damage the aircraft's tank structure.

- Blocked filters
- Fuel Quantity Indication Probes
- Corrosion and tank leakage



## Solo Working: FUELSTAT® makes the new normal easier

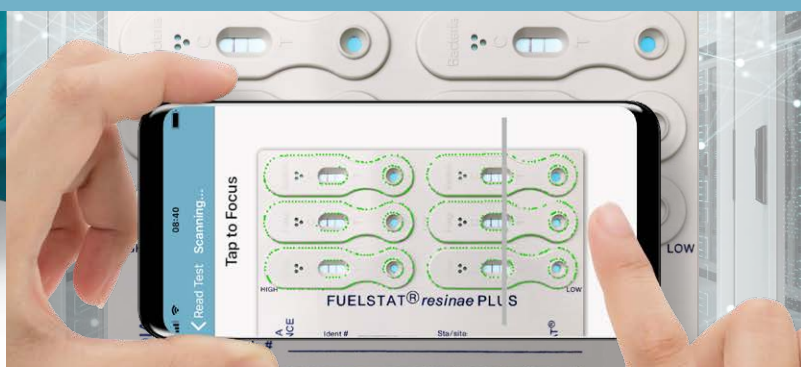
1. Test kit comes complete in sealed pouch

2. Watch training videos on smartphone



3. Do test, wait 10 minutes and get results

4. Transmit result to anywhere in globe



# THE SOLUTION IS AS SIMPLE AS 1-2-3

## FUELSTAT® PLUS

- The ultra-simple test that just requires **4 drops** of sample
- **15 minutes** to result as opposed to 4-7 days!
- **'Test at the tank'** technology - no laboratory required
- No requirement for additional **equipment** or **sterility measures**

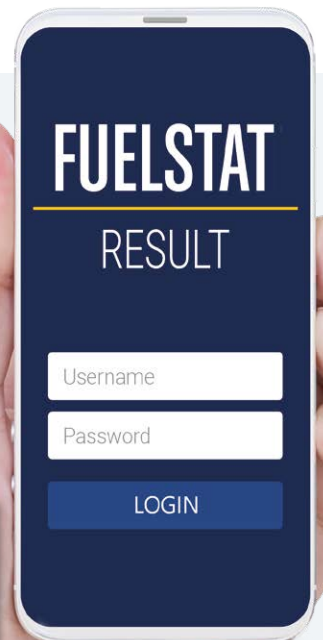


In critical times, you need a fast, convenient testing method - one that doesn't require multiple people to complete the process. Using FUELSTAT®, a single person can conduct tests at the tank after minimal training from our instructional videos. FUELSTAT® is based on immunoassay antibody tests. Just as a pregnancy test searches only for markers of human chorionic gonadotropin, FUELSTAT® only searches for the markers of bacteria and fungi that can grow in jet and diesel fuel and can potentially cause both operational downtime, corrosion and in worse case safety issues.

## FUELSTAT® RESULT



- The easy to use app that gives **immediate visual verification** of result
- **Reduces risk** of misinterpretation
- No need for additional equipment other than a smartphone
- Fully **detailed report** can be instantly produced in PDF format



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

Asset: Jet 1

Tank: Wing

Fuel lot: 4

Fuelstat test lot: HR 2 411

Bacteria: Negligible

Fungi: Heavy

Hormoconis resinae: Negligible

Overall result: Heavy

Test method: ASTM D8070-16

Comments

Example test Report - Annual Maintenance Check

FUELSTAT® Result data interpretation and guidance

Alert level	Phase	Target antigen limits
Negligible	Fuel	Up to 150 µg/L
	Water	Up to 33 µg/ml
Negligible — Repeat the test to confirm the result and increase the frequency of water drainage.		
Moderate	Fuel	Between 150–750 µg/L
	Water	Between 33–166 µg/ml
Moderate — Repeat the test to confirm the result and increase the frequency of water drainage.		
Heavy	Fuel	Greater than 750 µg/L
	Water	Greater than 166 µg/ml
Heavy — Consider immediate treatment, such as increased water drainage, to reduce the risk of engine failure.		

Phone make: Apple

Phone model: iPhone 6s

App version:

Portal version: 1.2.2

Analysis approved by:

**TRIED. TESTED. TRUSTED.**



## FUELSTAT®

### Who we are:

FUELSTAT® fuel tests are developed, manufactured and marketed by Conidia Bioscience Ltd. Based in UK, Conidia Bioscience was founded in the 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. To arrange for a distributor to support you simply contact [info@conidia.com](mailto:info@conidia.com).



## HAMMONDS FUEL ADDITIVES, INC.

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[www.biobor.com](http://www.biobor.com)



FUELSTAT® meets the ASTM  
International D8070-16 Standard



FUELSTAT® is listed as an approved  
product by Joint Inspection Group



FUELSTAT® is listed as a recommended  
product by IATA. Conidia Bioscience is a  
Strategic Partner with IATA

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