

FUELSTAT[®]



DEFENCE / MILITARY

**RAPID DETECTION OF
MICROBIAL CONTAMINATION
IN FUEL**

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Defence Industry Microbial Fuel Contamination

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

The very nature of military operations is such that activities are often carried out in times of conflict where time really is a matter of life or death. As such, can one really wait several days to identify whether their air, land or sea asset is at its optimum level, or potentially at risk of failure? The answer is, of course not.

Middle distillate fuels such as jet fuel and diesel are at risk of microbial contamination from very robust microorganisms that feed off the hydrocarbons in fuel and are nourished by even the smallest amount of water produced by environmental factors such as condensation that can enter the fuel supply.

Field based microbial fuel testing for all military operations

FUELSTAT® test kits have no special handling, transportation, storage or disposal requirements and are safe to be carried and administered in the real life conditions of most military operations, at a time when needed most. As a result these kits are widely approved by many Worldwide operations and include NATO listing and stock numbers.

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
- Malfunction of aircraft fuel quantity indicator probes
- Engine failures
- Corrosion and tank leakage

Can military operations realistically adhere to these parameters?...

Traditionally, fuel testing methods have depended on fuel samples being sent to a specialist laboratory for analysis. The next step is awaiting 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® Plus
Test results in 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 microorganisms that are known to thrive and do damage in diesel and jet fuel. Importantly results are not affected by on location conditions or less than perfect sterility when testing.

FUELSTAT® is simple to use, 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 organisations own protocol.

Military References

There are a variety of reference materials detailing fuel handling best practices to ensure fuel integrity in support of military operations:

- NATO STANAG 3149 Minimum quality surveillance for fuels
- National Military Technical Orders for fuel cleanliness

The FUELSTAT® diesel and jet fuel test kits carry the following NATO Stock Numbers (NSN) for easier ordering:

	NATO Stock Number	Vendor Number	Part Name	Nato Name	Part Number	Special Price
Aviation	4940 99 615 6295	FHR82	Fuelstat® Aviation Plus	FUEL TEST	0309 3511	\$1,250
Marine, Land Diesel & Fuel Storage	4940 99 907 9225	FMD8	Fuelstat® Diesel Plus	FUEL TEST	0309 3494	\$1,250



FUELSTAT®

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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 your Blackwoods representative for further information.



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