



INFORMATION SHEET 3 - FUELSTAT[®] *resinae* PLUS Test Kit

(Previously called Kerosene Advanced)

WHAT'S SO SPECIAL ABOUT YOUR KIT?

We do not utilise the traditional growth methods employed by all the other "rapid" tests currently on the market. Our kit is an immunoassay test (rather like a pregnancy test). This means that we detect contamination by "finding" material that is produced by the 3 different types of contamination that grow in fuel. We do not, therefore, need to capture a part of the living organism and grow it up. This is important as the fungus we detect *Hormoconis resinae* (*H.res*), also known as *Cladosporium resinae* or the Jet Fuel Fungus does not just float around at the water/fuel interface like the other ones; it actually sticks to the bottom or sides of the tank. It is also important as the compound is spread throughout the liquid of the tank, not just at the interface. There is, therefore, a better chance of finding that compound in a small sample. The result is a more accurate and consistent answer.

The objective of the test is to provide rapid screening of fuel samples (water in fuel or fuel), giving a quick and accurate assessment of *H.res*, bacteria, and other fungi including some yeasts in the fuel tank. This test is unlike current growth-based tests, which require a minimum of 72 hours to provide any results. The test measures the amount of active growth in the sample and provides actions and alert levels.

The kit will ignore any fungus that has been blown in from outside or has been growing on trees or other food source. The other tests will grow whatever they find in the sample - whether it came from the fuel or not. They require sterile sampling conditions, we just require that the sample equipment is clean (i.e. has no residue from the last test sample).

The **FUELSTAT[®] *resinae* PLUS** test takes 10 minutes to operate. The other tests take a minimum of 2 to 3 days to give a full picture of bacteria and fungi contamination. As fungal spores will not even show significant growth before 4 days a complete answer using traditional growth techniques takes five to seven days. During that time all the competitor products have to be incubated, and many have to be monitored daily. ATP based tests while rapid, show total life, and do not relate to activity growing organisms.

The results of most of our competitors are deduced either by comparing colours or spot numbers with a chart or (if you need to be very accurate) counting under a microscope. In our test you look at the six lateral flow devices on the test kit paddle and read off whether you have negligible (we never say nil), moderate or heavy contamination. The levels for moderate and heavy contamination appear in the IATA guidelines.

Most of our competitor kits require special handling, certainly for safe disposal. Ours (apart from the fuel itself of course) can be disposed of in the nearest bin when the test is finished or recycled if your company has a plastics recycling policy.