



## **Kathon FP 1.5 Fuel Preservative** **Numerous Reasons to Choose** **Kathon® FP 1.5 As Your Fuel System Biocide**

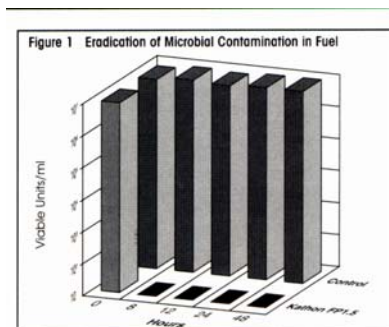
Microbial growth in stored fuel systems is a problem that can have serious consequences. Biocides can be the most cost-effective way to eliminate this problem, but only if the proper biocide is selected. Fuel systems that are seriously contaminated need a biocide that works fast and takes no prisoners. Keeping clean fuel systems free from biological growth requires a biocide that is stable and long lasting. Kathon FP 1.5 combines both of these properties in a single product. It also offers a number of other benefits that no other single fuel biocide can match.

### **Kathon FP 1.5 Biocide Works At Extremely Low Levels.**

Some biocides recommend treatment levels of up to 200 ppm as a curative dose. The recommended (and proven) effective curative dose of Kathon FP 1.5 biocide is only 100 ppm. As a result, Kathon FP 1.5 does not affect fuel properties and costs less to use on a per gallon treatment basis.

### **Kathon FP 1.5 Biocide Works Fast.**

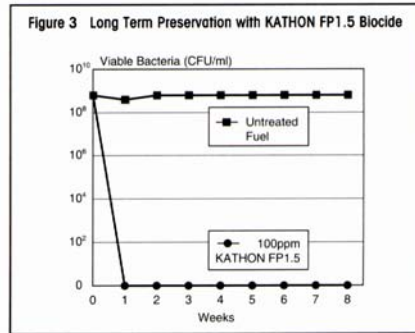
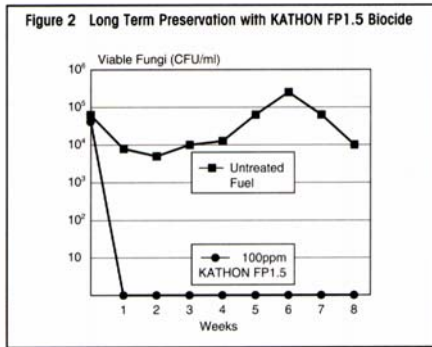
If you have biologically contaminated fuel systems, you don't have time to sit around waiting for your biocide to work. Unfortunately, some biocides take 3-7 days to **start** showing a positive effect. Others are biostatic and don't kill the microbes at all; they just stop the growth at an unacceptably high level. As Figure 1 indicates, Kathon FP 1.5 biocide can fully eradicate microbial populations in fuel systems in as little as 8 hours.



## Kathon FP 1.5 Biocide Keeps Clean Fuel Systems Clean.

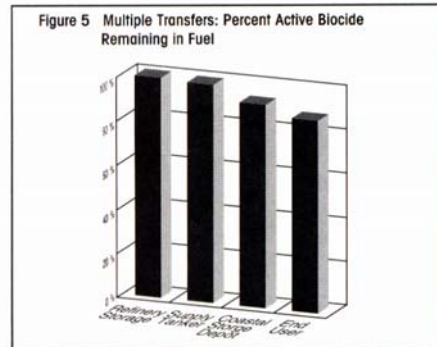
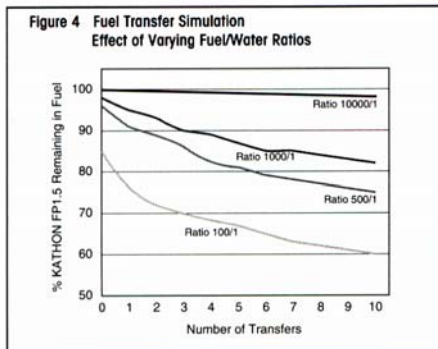
Long term storage often requires fuel systems to remain free of microbial contamination for extended periods of time. Problem is most fuel biocides can't deliver a long-term commitment. Kathon FP 1.5 biocide combines strength and stability to neutralize microbial attacks and keep fuel systems biologically clean during long term storage. Figures 2 and 3 show results of a study conducted over an 8-week period. Fuel systems treated with Kathon FP 1.5 biocide remained free from bacterial and fungal contamination, **despite additions of fouled water bottom every other week**. The end result is fewer biocide treatments and significant savings over time.

## Kathon FP 1.5 Biocide Protects Fuel In Distribution.



Most biocides either work in fuel or water, but not both. Some are inactivated by water. Some are only soluble in fuel. Kathon FP 1.5 works with a dual nature that sets it apart from other fuel biocides. Although it delivers a lethal level of biocide to the water bottom where microorganisms thrive, most of the biocide remains in the fuel phase. Computer modeling shows that even after 10 transfers, the fuel retains between 60 percent and 97 percent of the original dose (see Figure 4). Field data support his model: fuel treated at a refinery still had **88 percent** of the original biocide dose at the end-user level (Figure 5).

## Fuel: Water Ratios (for Figure 5)

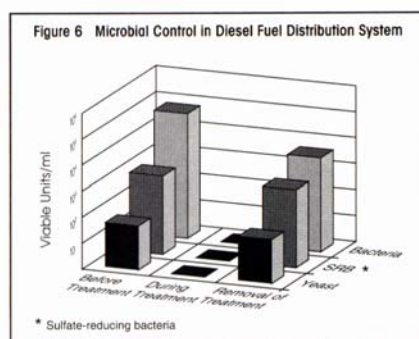


Refinery Storage	10,000:1
Coastal Storage Depot	1,000:1
Supply Tanker	1,000:1
End Users	500:1

## Kathon FP 1.5 Biocide Works In The Real World.

Laboratory test results are fine in certain situations, but quite often they cannot be duplicated in the field, where harsh conditions are frequently encountered. Kathon FP 1.5 biocide has a history of effective use under a variety of conditions, and tests by customers repeatedly show that it outperforms competitive products. Figure 6 illustrates results from a customer trial at an intermediate storage facility.

Prior to treatment, the high-turnover tanks were heavily contaminated, but the addition of Kathon FP 1.5 biocide to the incoming fuel stream eliminated microorganisms from the system. When the treatment program was discontinued, microbial contamination returned after the treated fuel was replaced.



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