

HYDRA FPB-77



Test Results

Hydra

FPB-77

PERFORMANCE OF HYDRA FPB-77 UNDER LABORATORY TESTS

Hydra FPB-77 effectively controls microbial contamination in a wide range of hydrocarbon fuels. Independent lab studies show that upon the addition of Hydra FPB-77 in the basefuels, it successfully kills off already present microbial colonies (yeasts, moulds and bacteria) and provides long term protection against future growth of the microbes.

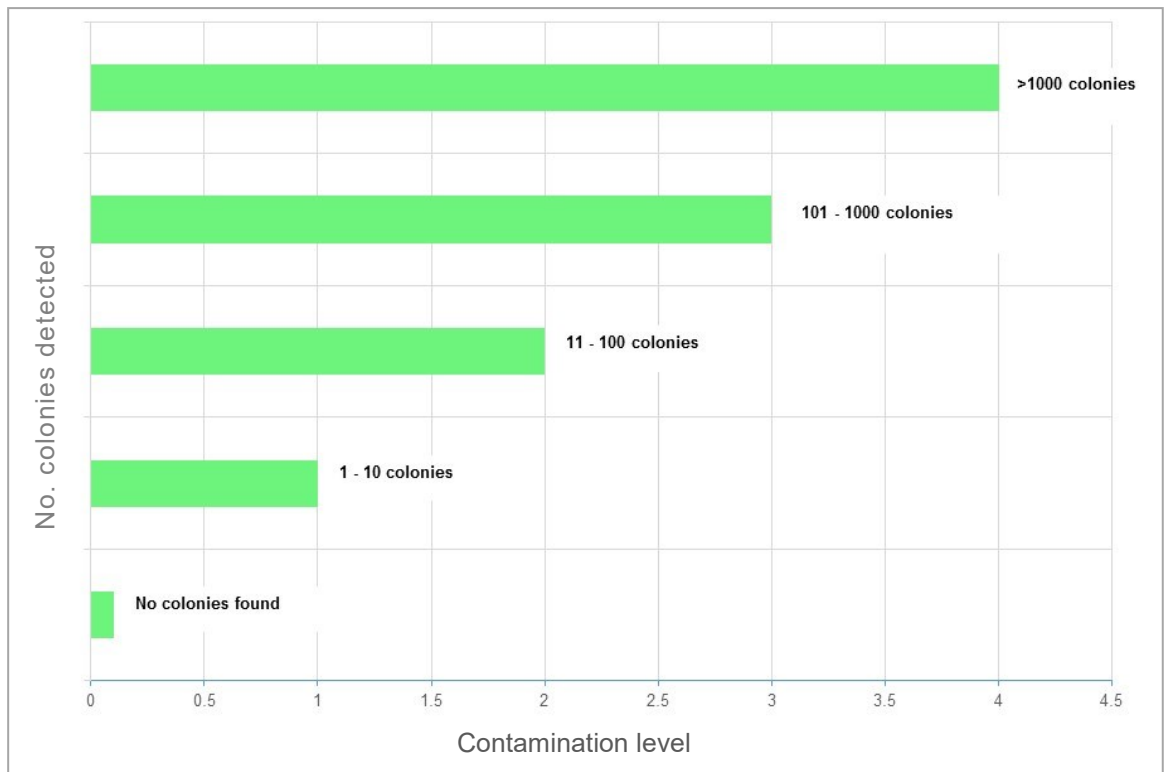
Following test results were obtained on various sample fuels after adding Hydra FPB-77. The testing methodology includes, the contaminated base fuel samples with bacteria, fungi, moulds and yeasts followed by storing the contaminated fuel over a water layer. The sample thus obtained is observed and tested for microbial activity.

Microbes used for contaminating the fuel includes:

Bacteria: *Pseudomonas aeruginosa* (10^6 in fuel)

Fungi: *Hormocoins resinæ* (10^5 in fuel)

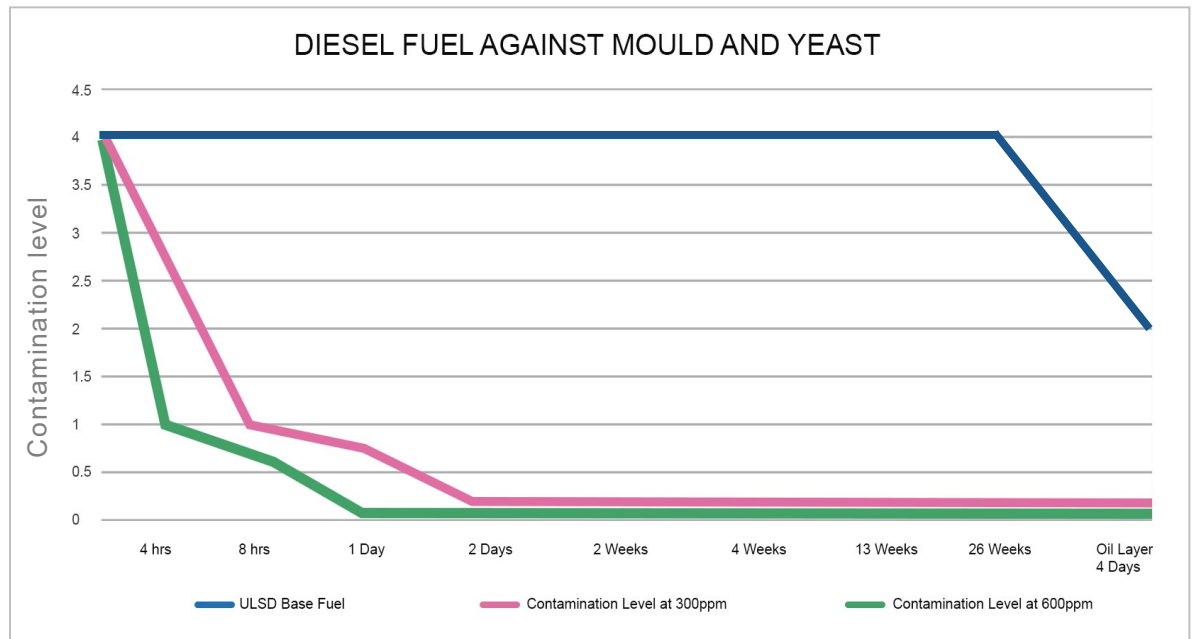
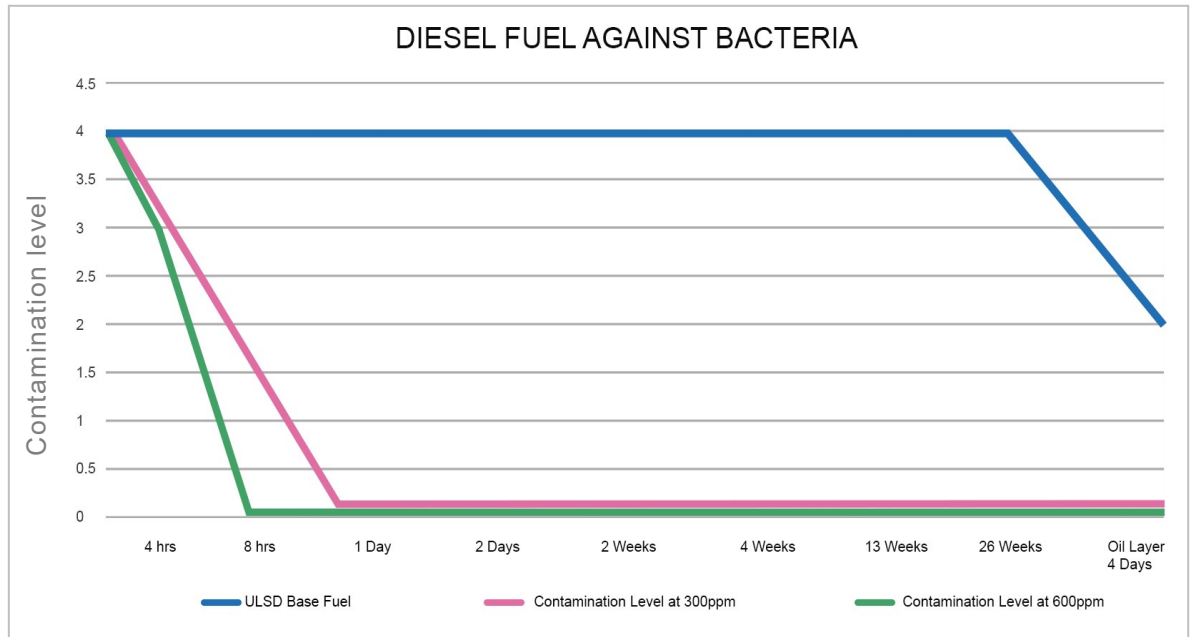
Fungi: *Yarrowia tropicalis* (10^5 in fuel).



Following graphs show the contamination levels found in the polluted fuel samples after treatment with FPB-77. The “kill rate test” was performed at determined intervals and conclusions drawn assess the number of active colonies in various samples. In all the samples, the biocidal action of Hydra FPB-77 was effective for at least 26 weeks.

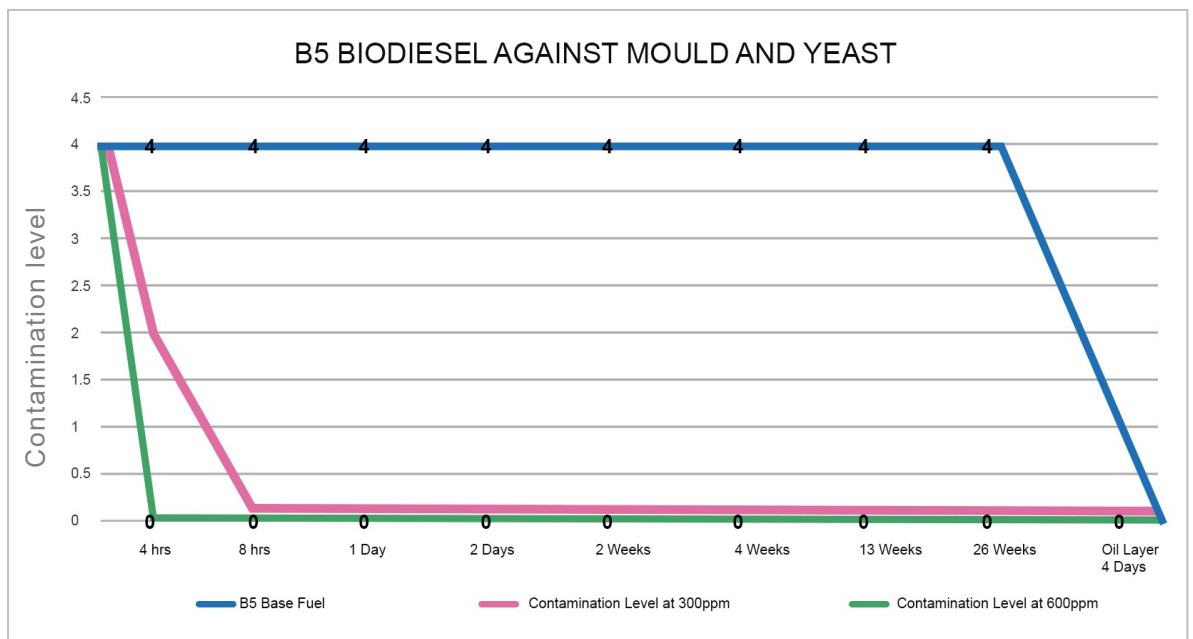
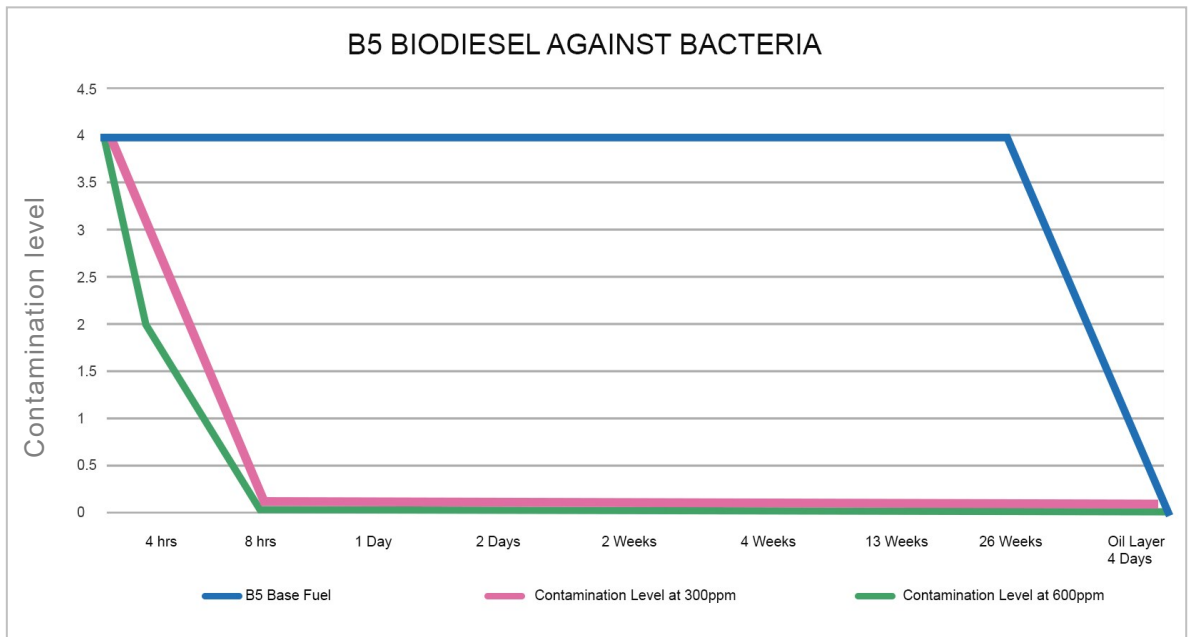
Diesel Fuel (ULSD):

FPB-77 was noted to immediately kill of microbes at 300 PPM efficiently with long term effect lasting 26 weeks.



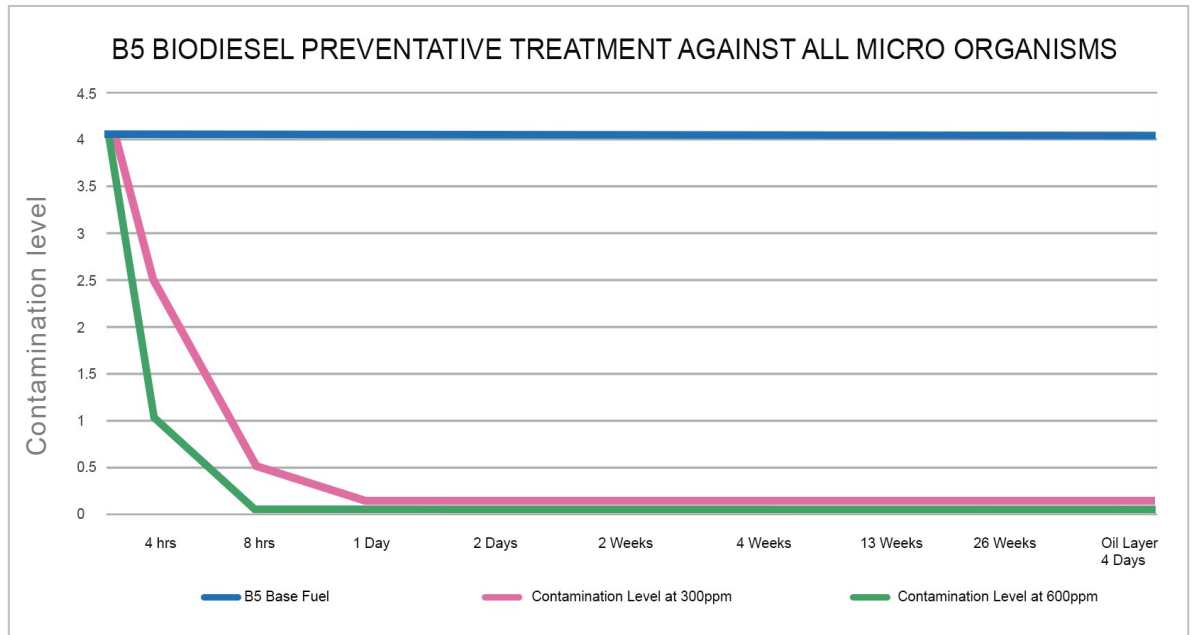
B5 Biodiesel:

Hydra FPB-77 was noted to immediately kill of microbes at 300 PPM efficiently with long term effect lasting 26 weeks.



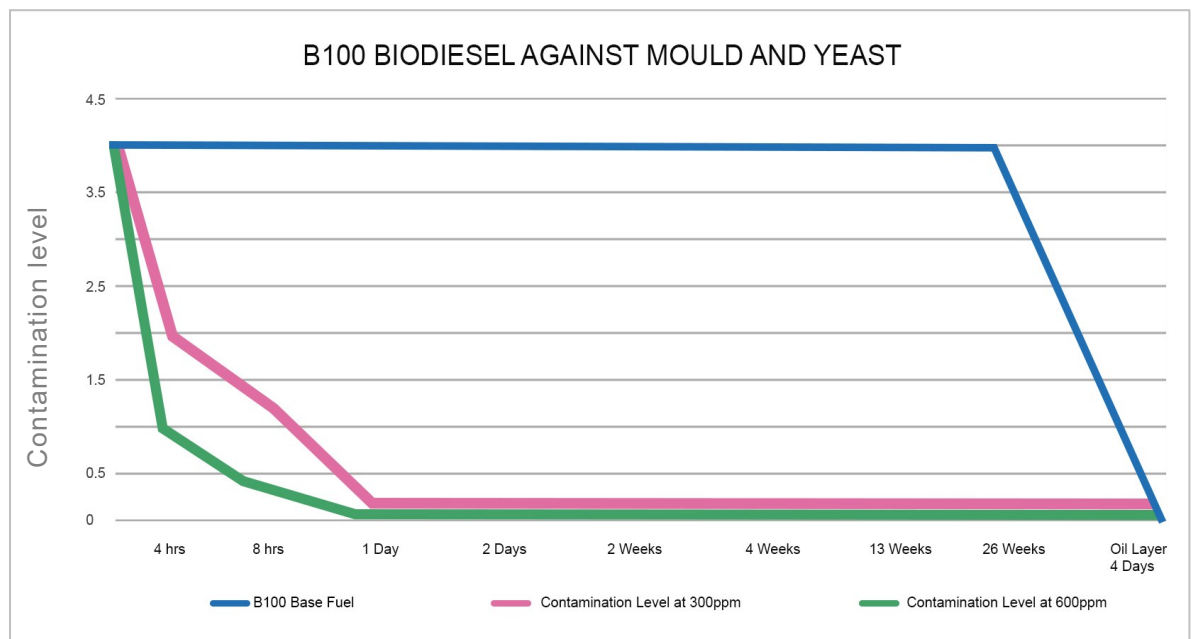
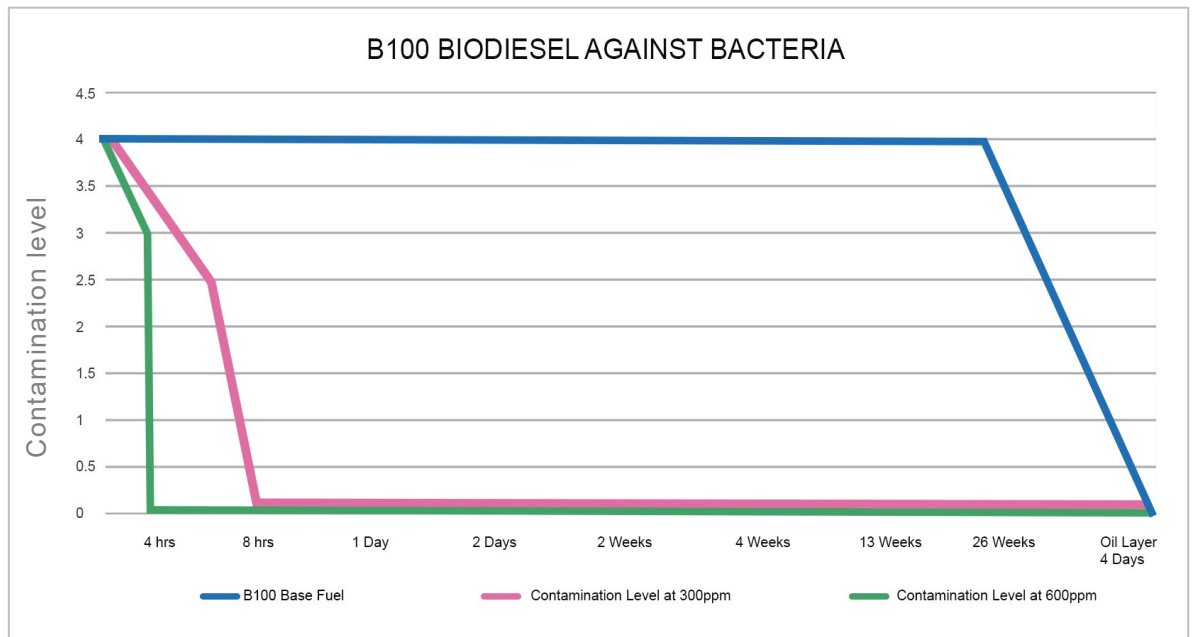
B5 Biodiesel (Preventive Treatment):

The earlier samples of B5 Biodiesel treated using Hydra FPB-77 were used to assess the preventive effect of the product. Above mentioned microbes were reintroduced in the treated samples and it was observed that FPB-77 effectively provided protection against contamination for at least 26 weeks.



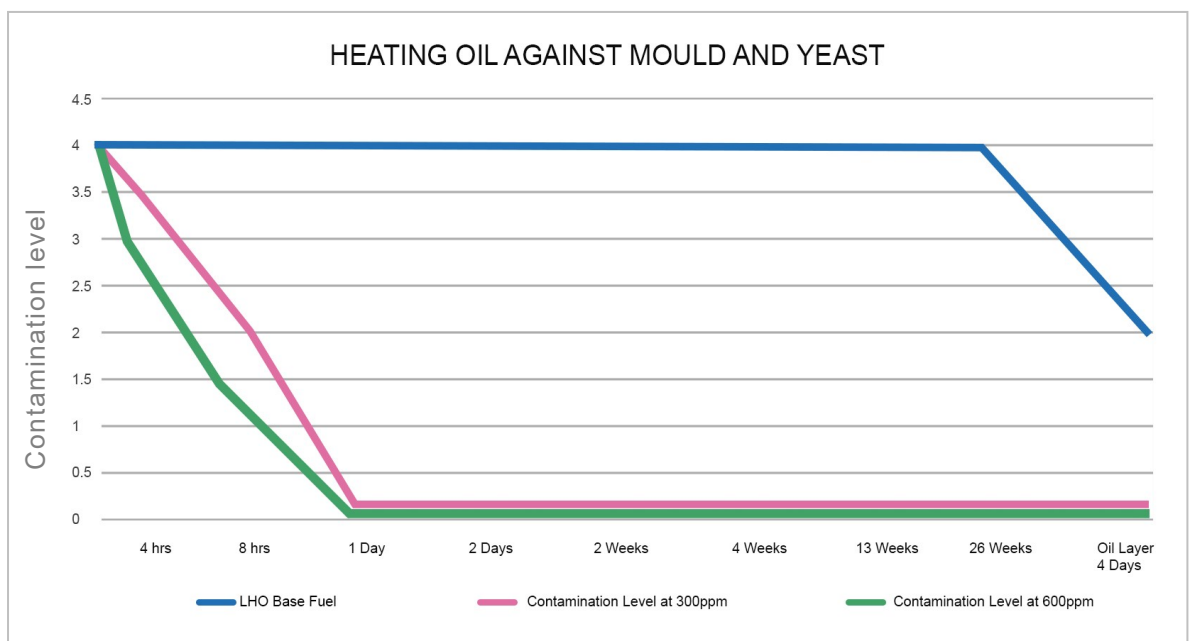
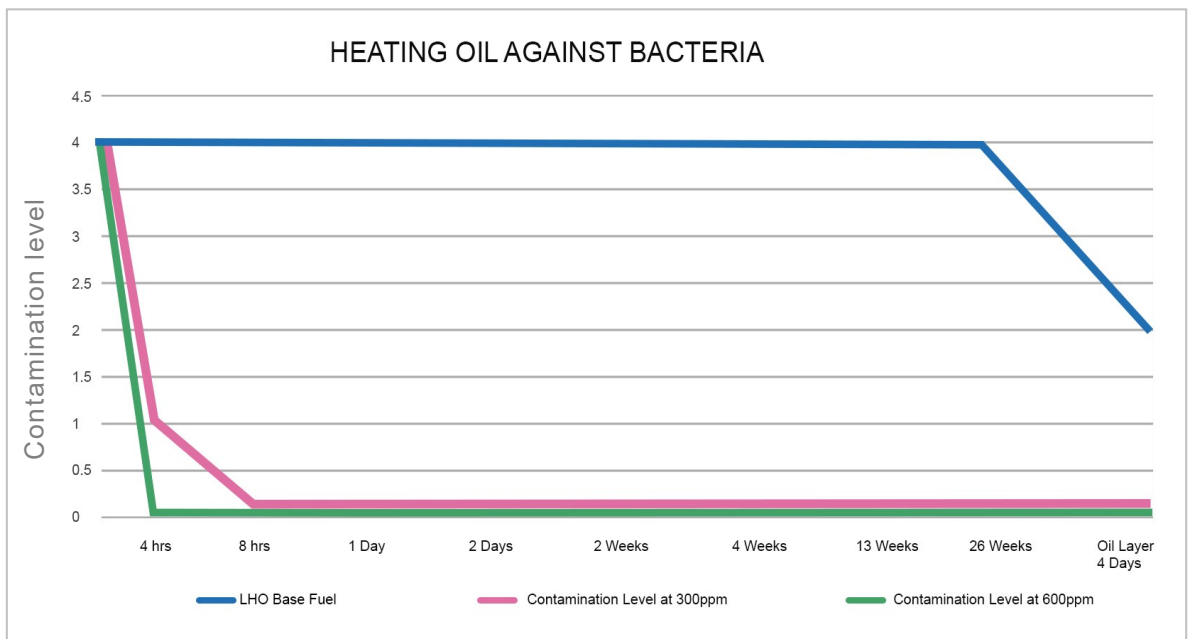
B100 Biodiesel (FAME):

Hydra FPB-77 was noted to immediately kill of microbes at 300 PPM efficiently with long term effect lasting over 26 weeks.



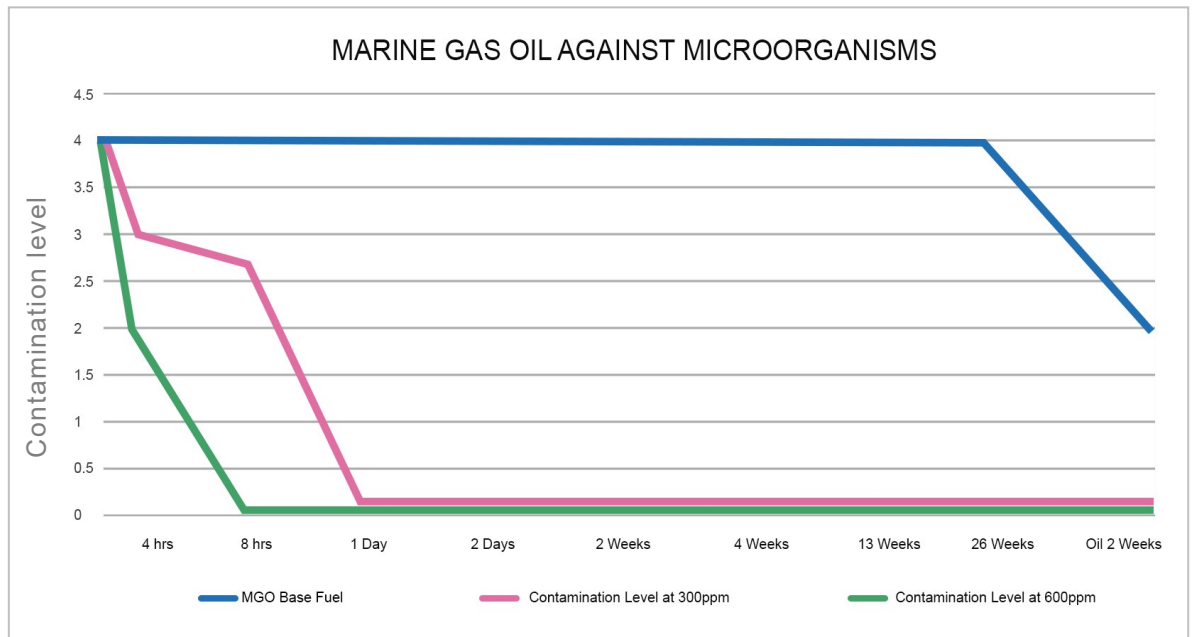
Heating Oil (LHO):

Hydra FPB-77 was noted to immediately kill of microbes at 300 PPM efficiently with long term effect lasting over 26 weeks.



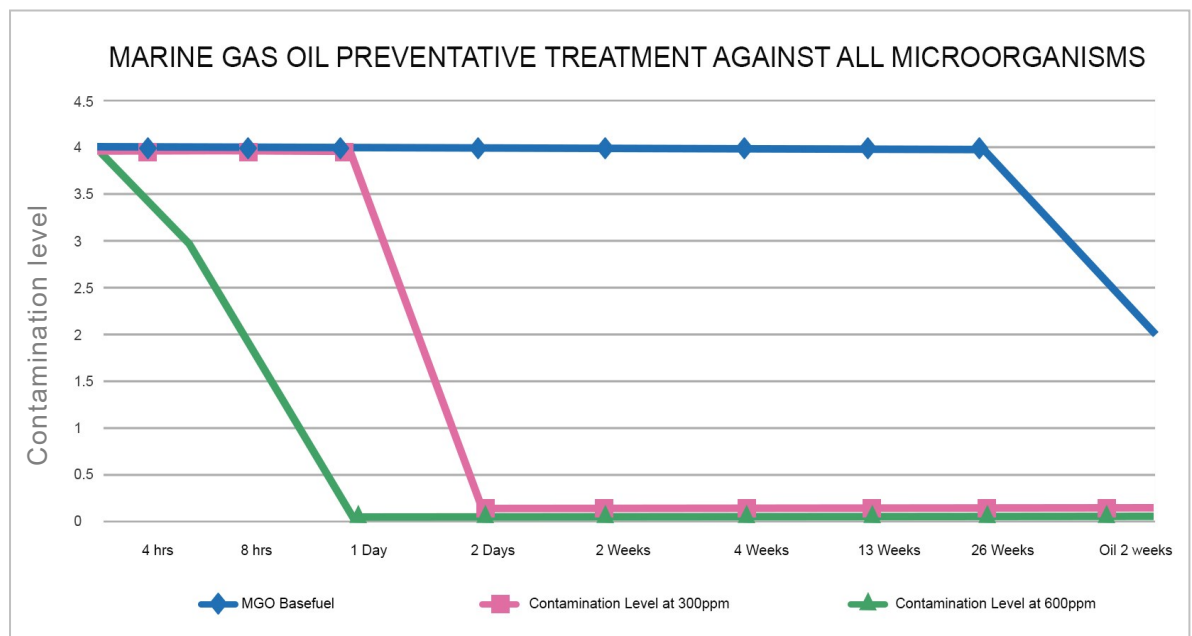
Marine Gas Oil (MGO):

Hydra FPB-77 was noted to immediately kill of microbes at 300 PPM efficiently with long term effect lasting more than 26 weeks.



Marine Gas Oil (preventive treatment):

The earlier samples of Marine Gas Oil treated using Hydra FPB-77 were used to assess the preventive effect of the product. Above mentioned microbes were reintroduced in the treated samples and it was observed that Hydra FPB-77 effectively provided protection against contamination for at least 26 weeks.





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