



675 Central Drive Skyway Industrial Park Presque Isle Maine 04769 207-768-0781

EVALUATION OF BLU-BIOWASTE TREATMENT MICROBIAL INOCULANT AS IT RELATES TO HYDROGEN SULFIDE AUGUST 12, 2024

Background

Blu-Bio is microbial inoculant used to treat wastewater with in the car wash industry. The product is distributed by Reclaim Filters and Systems, Inc of NC.

This product has been empirically shown to reduce hydrogen sulfide and odor. However, Reclaim does not have any analytical data that indicates the reduction in hydrogen sulfide.

This trial was conducted to determine what, if any, reduction in hydrogen sulfide is observed with the addition of Blue Bio.

Experimental Design

This experiment was designed to determine what, if any, impact the addition of Blu-Bio had on car wash water.

The experiment was designed in a fashion to simulate the treatment observed in a commercial car wash wastewater treatment system in a laboratory environment.

The parameters controlled in the laboratory are as follows

- Dose of Blue Bio
- Aeration Rate
- Temperature
- Time

Materials

Car wash wastewater from a commercial car wash was provided to ATC Labs from Reclaim. This water had a hydrogen sulfide level of 1.55 ppm upon delivery.

Blu-Bio was used directly from a 5 gallon container of Blu-Bio and was used at the rate prescribed by the manufacturer.



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Methods

Blu-Bio was introduced into the car wash water at the rate prescribed by the manufacturer

Car wash waste water is commonly treated in two methods

1. Aeration alone
2. Aeration and biological inoculation

This trial was set up to compare and determine if the addition of Blu-Bio had an impact that is greater than aeration alone.

Two treatments were evaluated:

1. Treatment one was aeration alone
2. Treatment two was aeration with Blu-Bio

Each treatment had aeration delivered at a similar concentration as a commercial application

Samples were taken from each treatment at hour intervals and analyzed for hydrogen sulfide

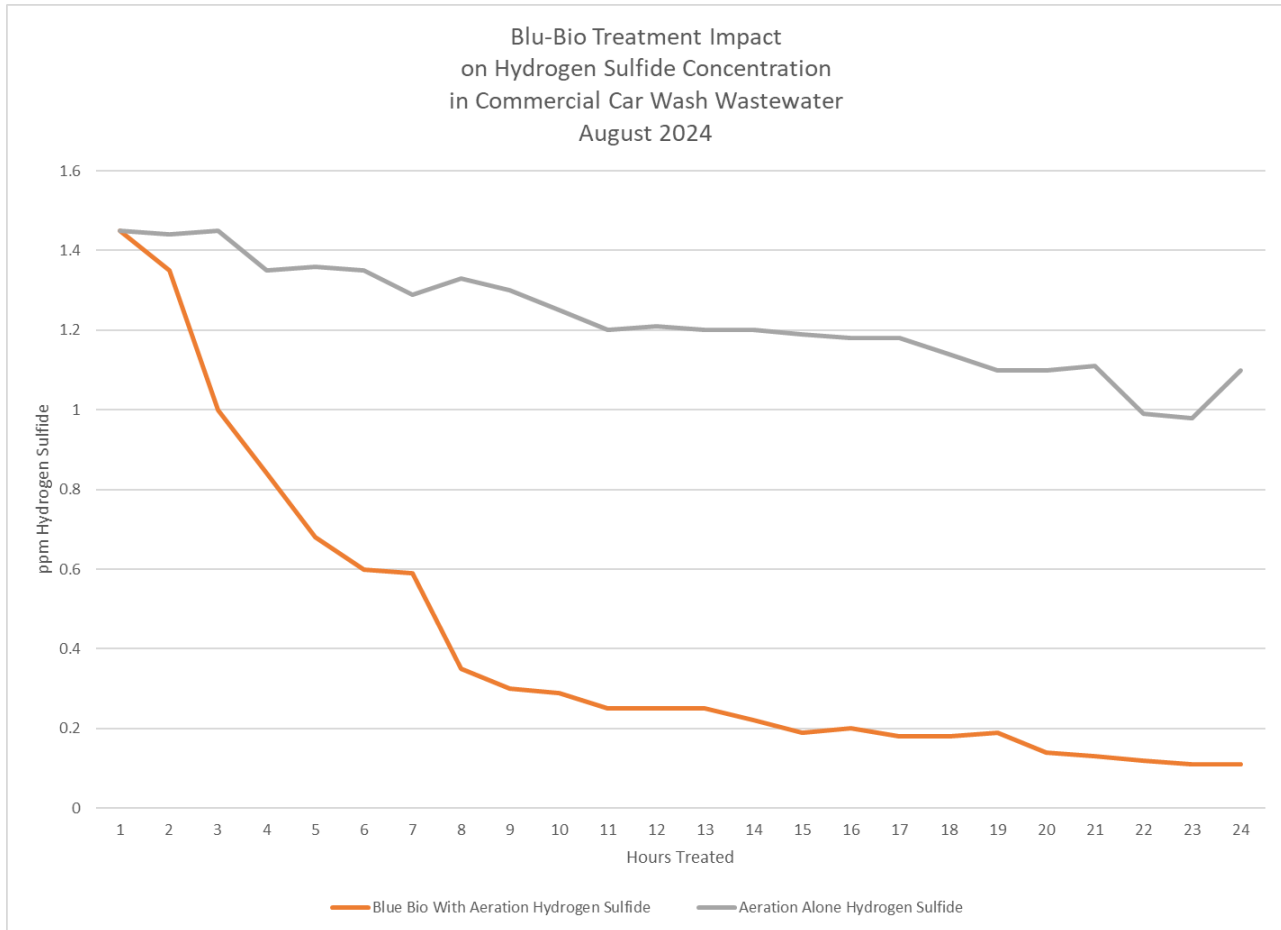
This trial was repeated three times and the average data is reported in this report



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Results

Below are the graphic results of this trial





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Discussion and Conclusion:

As can be observed in the data above, the addition of Blu-Bio increased the reduction of the total hydrogen sulfide in commercial car wash wastewater compared to aeration alone.

As can be observed from the data above the addition of Blu-Bio increased the rate of Hydrogen Sulfide reduction in commercial care wash wastewater compared to aeration alone.

These data indicate that the addition of Blu-Bio to a commercial car wash wastewater stream with aeration will greatly decrease the amount of hydrogen sulfide present.

No conclusions can be drawn from Blu-Bio being used in waste water that is not aerated. This type of evaluation was beyond the scope of this trial.

These data indicate the following:

- Addition of Blu-Bio to commercial car wash wastewater will reduce Hydrogen Sulfide and odor
- Addition of Blu-Bio treatment improves the total reduction and rate of reduction of hydrogen sulfide in commercial car wash wastewater
- These data indicates that Blu-Bio could be used at lower level than that prescribed by the manufacturer for the reduction of Hydrogen Sulfide

Respectfully submitted

G. Noel Currie III B. Sc. CMA CMR
President ATC Labs