

American Biotech Labs

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Summary Of Water Treatment Tests

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A number of government disinfectant approvals have already been awarded to American Biotech Labs on two of its products, both the ASAP-10 and ASAP-AGX-32 products. Both products have been thoroughly tested for toxicity at the levels at which they are being used, and in all cases the products were found completely non-toxic. Because the products have no smell and no color, and once diluted into water, have no taste, the products seemed a perfect answer to both medium and small-scale culinary water treatment. The problems with common water disinfectants are that the products are caustic in concentrated form, taste bad once mixed into the water, can form cancer causing disinfection by-products. Because of the reluctance of individuals to drink water that tastes bad, serious problems can arise with dehydration, especially in hot climates. With these facts in mind, the management of American Biotech Labs set out to establish the optimum amount of the products needed to achieve water disinfection in filtered and raw river water. In order to effectuate the test work, management enlisted the help of an independent EPA approved lab. Three different test series on three separate days, by two different individuals have now been completed.

First Test Series

In the first test series completed by Mr. Bill Dodds, five tests, including a positive control, were completed. The lowest level of product tested in the series was a level of 0.10 ppm or a dilution of the ASAP 10 product down to a dilution of 1/100 the original strength. This is the equivalent of putting one eight-ounce bottle of ASAP 10 ppm Solution into 6.25 gallons of water. At this level the product was able to kill all of the bacteria in clear river water in just 1.5 minutes of contact time. Also, the bacterial challenge in this test was increased by adding two loops of bacteria (approx. 200,000 additional bacterium per ml.) to make sure that the bacteria counts in the raw river water were very high. In conclusion, the test reported that even with all the added bacteria in the raw river water, the product killed them all in 1.5 minutes of contact time.

Second Test Series

The second test series was completed by Mr. D. Gerard Yates. Mr. Yates is the director of three EPA-approved labs. He is a Nationally recognized water expert. There were 15 tests completed in the second series, including a control sample and also a second control sample which had been pumped through a humanitarian-constructed (five gallon) water filter, which consisted of both a two-micron filter and a foot-long charcoal filter. A control sample is a sample which is left untreated (no disinfection product is added at any time), this is done to establish how many bacteria are naturally found in the water. The first control sample had bacteria levels to numerous to count. Surprisingly, the second control sample that had been put through both filters, still had bacterial levels that were too numerous to count. This means that even if an

individual is using a filtering system for water purification, they would still need to add a water disinfectant to kill the bacteria, because even a two micron water filter will not significantly reduce the amount of bacteria in the water. The other 13 disinfection tests were completed at various levels of product and at various time frames. One of the intents of the second test series was to test whether the product was able to kill bacteria at even higher dilution levels, if longer treatment periods were used. The lowest level tested in the series was completed at a dilution of 0.05 ppm of ASAP-10 product (the equivalent of putting 8 ounces of ASAP 10 Solution into 12.5 gallons of water). At that level it was found that the product would in fact kill all the bacteria in the filtered raw river water in 20 minutes. Also, as part of the series the product was again checked at 0.10 ppm, using a time frame of 10 minutes. The product again was found to be effective at killing all the bacteria in the filtered raw river water at the 0.10 ppm dilution, using the 10 minute time frame.

The Third Test Series

The third test series was initiated with the intent to duplicate the water treatment tests that had already been completed at the 0.10 dilution level, and to test the ASAP-AGX-32 (AGX) product at the same dilution as the ASAP 10 had been tested at. The theory was that if the AGX product was as effective at the same dilution, it being over three times stronger, then less product would have to be shipped to distant destinations to effectuate the same amount of water treatment. Eleven tests were completed in all, including both positive and negative controls. Three tests were completed using the AGX product. The tests were completed at 0.10 ppm and at time intervals of 05,15, and 20 minutes. In all three tests the AGX product killed 100% of the bacteria in the clear raw river water. The tests indicated that the AGX product was at least as effective as the ASAP 10 product at the same dilution of 0.10 ppm. This means that according to the study, in just 5 minutes of contact time, two teaspoons would treat a quart of water (canteen size), eight teaspoons of the AGX product would kill the bacteria in a gallon of clear raw river water and one 16 ounce bottle of the AGX product could kill all the bacteria in 37.5 gallons of clear raw river water. One gallon of AGX would disinfect 300 gallons of clear water in a water tank or buffalo, in 5 minutes.

Forth Test Series:

The forth test series tested the ASAP-AGX-32 in a very turbid sample of raw river water. Test results verified that with 20 minutes of contact time more than 90% of the bacteria was killed at with dilutions of both 0.10 ppm and 0.30 ppm. In all samples there was bacterial growth. These results were expected, as pieces or organic material in the turbid samples protect or shield the bacteria from the AGX product. In raw filtered samples, the AGX product effectively kills 100% of the bacteria in as little as 10 minutes with a 0.10 ppm solution. Filtration prior to disinfection of raw water with the AGX product is necessary in order to provide bacteriologically safe drinking water.

Additional Infromation

I asked Mr. Yates about water purification and the problems with using chlorine bleach etc. to kill bacteria in water. In answer to my question he wrote a report about water treatment. In that report he stated that chlorine had some nasty side effects and problems, including the fact that the chlorine can react with organic matter in the water to form a number of harmful disinfection byproducts, including haloacetic acids and other carcinogens (cancer causing agents). But he also stated that chlorine was the only reasonable answer they have for large-scale water purification. He also stated that for smaller-scale usage (like for drinking water), he thought that according to the completed test work, the use of the American Biotech Labs' products are potentially a better alternative for water disinfection.