

Abstract

The purpose of my experiment is to create an efficient, but practical method to disinfect water for consumption. This method was to kill microbes by irradiating contaminated pond water samples with ultra violet radiation. To do my experiment, I gathered pond water and put them into water bottles. 5 UVA ray lamps were used as artificial sun light and I put the bottles underneath and set up different time intervals for each bottle. With different amounts of time exposure of UVA rays, I collected the turbidity in NTU units of each water bottle. Decreased turbidity would indicate that microbes were being destroyed. The outcome of my experiment was that as the amount of sunlight time increased, then the turbidity increased. This was unexpected. As I was conducting my experiment, the water became an opaque color, although it was translucent. The water began to take on a greenish tint. Thus, I suspected that the ultraviolet I was providing was encouraging algae to grow. The data is reliable as it showed that as time increased, then the turbidity increased. The mean turbidity was calculated and the trends were analyzed with a scatter graph (line graph). The relationship between the hours and turbidity is proportional. The trend of the variables was positive which was unexpected. I found that this was not an effective method or practical method to clean water efficiently.

(230 words)