

Abstract

Project Title: Homegrown Ozone

Project ID: 178

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The purpose of the experiment is to test which areas have the highest levels of tropospheric/unnatural ozone in Saginaw County. When unnatural ozone collides with the natural ozone people could become sick from ultraviolet (UV) rays. The importance of the experiment is for people to learn about ozone and to help the environment. Ozone strips are a good way to test local ozone levels. The information is valuable because it can help people identify high ozone levels which can contribute to respiratory problems, cataracts, cancer, and more. In order to do this experiment, a day was chosen with the humidity between 30 and 60 percent and five areas in Saginaw County were tested. One ozone strip was held for 10 minutes without any direct sunlight and no wind. After the 10 minutes, the color of each strip was recorded, and pictures were taken at each area. The next step was to compare the color of each strip with an ozone color scale in micrograms per meter cubed ($\mu\text{g}/\text{m}^3$). The places that were tested had either a landfill, water, industries, an airport, or a farm field. Areas with the highest levels of ozone had industrial areas, such as restaurants and a lot of traffic near them. Therefore, the hypothesis was supported because regions with industrial areas showed the higher levels of ozone.