Water Quality of Multiple Bodies of Water In NYC

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INTRODUCTION

Water testing; something we all dread doing but have to anyway to make sure the water we consume is safe. We all focus on the water we drink but we don't really hear about who tests out the bodies of water we commute past almost every day. Nobody really knows how clean this water is yet some people still jet ski, canoe, and do other active things in our NYC water. My group has set out to expose the filthy truth about the bodies of water in NYC. We are testing the water quality of rivers in our local parks to identify contaminants and to determine any extra minerals in our water. Most of the bodies of water we have in NYC are freshwater and saltwater mix which is why you may see oil like blobs in the water sometimes (saltwater and freshwater don't always mix so the saltwater can sometimes float to the top). When we think of unsanitary bodies of water the first thing that comes to mind for most of us is the Gowanus. It is said that even 2 minutes in that water can leave you with some serious problems, and for that reason, nobody from our group was brave enough to get any samples from there. However, almost all of our bodies of water are disgusting if we are being honest (not as dirty as the Gowanus but dirty). Our results will be compared to local and/or international water standards. We have measured lead, copper, bacteria, nitrate, nitrite, chlorine, pesticides, iron, pH, and the hardness of the following bodies of water: *Brooklyn Bridge Park: East River, Bronx River, Hudson River, and Flushing Bay.* Based on the background information, we hypothesized that all of the water samples will have a higher containment level than the guided water standards.

PROCEDURE AND MATERIALS

In order to conduct this experiment, specific materials and procedures were used. Water samples from different rivers, lead, pesticide, copper, iron, nitrate, nitrite, pH, hardness and chlorine test strips, and timer. The four levels of treatments that were used are a sample from Brooklyn Bridge Park: East River, Bronx River, Hudson River, and Flushing Bay: East River. The independent variables are the water samples from different rivers because it is expected to contain different dependent variables, containment levels. The control for this experiment is the international guided water standards since all the dependent variables will be compared to it. The experiment had a sample size of four and was replicated once.

Before collecting the water samples, it is important to have the water safety test kits ready because as time goes by the bacterium or the levels of chemicals can change. First, in order to test copper level, immerse the copper test strip into the water sample and move it in a gentle motion for 30 seconds. Wait 2 minutes, and then match the color of the strip to the chart provided