The Effects of Different pH levels of Chlorine on the Tooth Enamel

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The aim of this research study is to evaluate the enamel erosion due to the different pH levels in chlorines typically used in swimming pools (sodium hypochlorite, lithium hypochlorite, and calcium hypochlorite). Typically, many people with discolorations related to their teeth have inferred that the main cause may be related to being in high concentrated swimming pools for a long period of time. In my experiment Bovine and Canine teeth were immersed into the three different solutions to test the overall differences in the coloration and weight of the teeth. Pictures and weights were taken before and after the experiment to discover any differences that may have come about. Ultimately from a visual perspective, this methodology didn't work as I expected in changing colors. While they're in the chorines for a longer period of time, there might be other underlying factors that contributed to the color change in teeth in a living organism vs. in a solution. Future studies could assess the idea that the saliva around the tooth in an alive organism could be the cause of the discoloration and decalcifican when mixed with chlorine. Furthermore, the chemical reaction chlorine and saliva may have is different from testing the teeth without the saliva variable. In time, changing color may create more underlying health conditions or issues in those that stay in pools for long periods of time, and a study assessing conditions in living organisms may help us better understand the issue.

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