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Collidal Silver - Nature's Cure Or Fool's Gold?

This project's purpose was to determine whether the concentration of colloidal silver would affect bacterial growth. Colloidal silver is marketed today as a product that kills or reduces bacteria and other pathogens in the human body. I hypothesized that if the concentration of colloidal silver decreased as applied in equal quantities to sealed sterile dishes containing the same bacterial cultures, then, after incubation, the area of the inhibition zone also would decrease. During the preliminary trial, I tested different colloidal silver products, both with HCl (hydrochloric acid) to simulate stomach acids and without HCl; I wanted to determine which product to select for the final experiment. With a sterile swab, I streaked eight agar plates equally with staphylococcus epidermidis and placed the sealed plates in an incubator for 19 hours. Then, I added 50 microliters of each colloidal silver solution to eight plates with half containing HCl. I incubated silver solution to eight plates with half containing HCl. I incubated the plates and observed for zones of inhibition at one hour and 19 hours. After reviewing this data, I selected "Brand A" and "Brand B" for the final experiment, testing them in various concentrations without HCl because the HCl control plate showed that HCl was toxic to the bacteria. The data collected did not support the original hypothesis. No zones of inhibition were observed due to the colloidal silver products at any concentration used in this in-vitro experiment. These findings lead me to believe that the concentration of colloidal silver does not affect the zone of inhibition of an agar plate.