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Dem Bones Dem Bones: Dem Dry Dry Bones

The purpose of this investigation was to determine if different liquids (vinegar, water, Coca-Cola, tonic water, milk, bleach) affect the rigidity (distance of bend in centimeters from a neutral position until fracture) of sanitized chicken bones after being submerged in the different liquids for 11 days. I hypothesized that if the chicken bone was submerged in vinegar for 11 days, then the bone will lose the most rigidity.

The experiment involved measuring and pouring different liquids, storing them for 11 days, and breaking them. The bones were broken and measured using a process which bent the bone until it cracked and measuring the difference in height from before and after the fracture.

The data collected did not support the original hypothesis. The data collected showed that chicken bones submerged in tonic water averaged a 5.3 centimeter bend. Water averaged a 3.8 centimeter bend, Coca-Cola averaged 4.3 centimeters, milk averaged 4.7 centimeters, and bleach bent on average at 1.9 centimeters.

These findings led me to conclude that bones submerged in tonic water lose the most rigidity.