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Growth and Sound: Frequencies in Relation with Crystals

The purpose of this project was to test does different tonal frequencies effect on the growth of an artificially grown crystal. I hypothesized that the higher the tonal frequencies cause an increase in the growth of an artificially grown crystal. The experiment involved four different frequencies. Each experiment has five trials using calcium copper acetate hexahydrate crystal solution with different frequencies for three consecutive days. The results from the first experiment showed that the tests were inconclusive due to the fatal flaw of not having grown the crystals via a seed crystal, thus resulting in immeasurable small crystals. To further this research, a second experiment was conducted. The second experiment used potassium aluminum sulfate (alum) crystals, and seed crystals. The second hypothesis was that if different tonal frequencies cause the seed crystal to vibrate, causing it to relatively stir the crystal solution, then there would be an increase in crystal growth. The second experiment also used different frequencies to allow growth for two days. The results of the second experiment did not support the second hypothesis, showing a decline in crystal growth as sound was introduced. These finding lead me to believe that the higher the frequency the higher the decrease in crystal growth there is.