



CALIFORNIA STATE SCIENCE FAIR 2005 PROJECT SUMMARY

Name(s) Victoria B. Hilley	Project Number J1110
Project Title The Crunch Munchers vs. The Mush Mashers	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this project was to investigate which cereal really stayed crispy longer. I became interested in this project when I often observed how quickly my cereal turned soggy. I realized how important it is for crunch munchers as well as mush mashers to know which cereal will get soggy the quickest. As I was viewing cereal commercials, I wondered how true their claims were that their cereal stays crunchy in milk. This experiment involved taking different brands of cereal and soaking their pieces in three types of milk.</p> <p>Methods/Materials Before you start soaking cereal, you need to build a simple testing stand. A testing stand will be built using six ice-pop sticks, white glue, and foam-core board (available at office supply stores). The basic procedure is to soak different types of cereal in different types of milk, using tweezers to put the cereal bits one by one over the bottom hole of the testing stand, and using a stopwatch to time how long it takes a stick (like a pencil with a round tip) to push its way through each wet cereal bit.</p> <p>Results The results confirmed my hypothesis: the thickness of the cereal, the amount of sugarcoating and the type of milk created differences in the time cereal takes to get soggy. The round puffed cereals took the longest to get soggy due to their thickness, and various types of coatings used to keep them crunchy. The sugarcoated cereals did stay a little crispier longer than their counterparts within the same categories. My testing also confirmed that whole milk and 2% milk did keep the cereals crispier longer than the non-fat milk. The results show that the fat provides an additional barrier between the cereal piece and the water in the milk.</p> <p>Conclusions/Discussion In conclusion, how long cereals remain crispy depends on the thickness of the cereal bit, amount of sugarcoating, and the fat content found in milk. I tried to find more information on fat versus milk, since the two components are not soluble in one another unless they are emulsified. It would make sense that the overall crispiness times of the cereals would be shorter in the non-fat milk, since it is like water. As you would see the coating in the inside of a glass from drinking 2% or whole milk, that same affect could also coat onto the cereal pieces, helping the cereal to remain crispy a little longer. So for now, if it is crunch you are after, the trick is thick and no fat free milk.</p>	
Summary Statement My project is about determining which cereals stayed crispy the longest using three different types of milk.	
Help Received Mom helped type report; Dad went to grocery store; Dr. Dunn proofreading report and provided direction.	