

# Ice cream lab

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January 26, 2013 Ice Cream Lab Purpose The purpose of this experiment is to learn and investigate chemical and physical properties of food, such as flavor, texture and consistency while producing ice cream. Materials ? cup pasteurized egg 1 cup of sugar 1 cup whipping cream 2 cups half and half 1 tbsp mint extract ? cup of chocolate chips 1 cup table salt 1 bag of ice 1 whisk 1 measuring cup, 2 cups size 1 large bowl 1 medium bowl 1 empty coffee can Method In a medium bowl, whisk pasteurized egg. When thoroughly mixed, then add half and half, the whipping cream, sugar and mint extract. Mix thoroughly.

In a large bowl add a two inch layer of ice, a layer of salt. Place the contents of the medium sized bowl in the coffee can and submerge the can in the ice. Fill in sides evenly with ice and the remaining salt. Spin the coffee can in the ice. In 15 minutes you will be able to feel the mixture hardening on the sides of the can. In one hour the entire mixture should be solidified enough for consumption. Results/Summary This was second attempt at this lab. Each time I had two little helpers, aged 11 and 7 in the kitchen that helped measure, mix and assemble. This time we had a can with a lid so they were able to help more this go around.

Our mixture came up over the rim of the coffee can and when spinning, some of the mixture leaked out. The mixture was continuously moving this time in a metal can, which I think helped the freezing process happen more quickly. Once again, in the end, the kids liked it but I thought it thawed rather quickly again. I used sugar instead of honey this time and liked the flavor more. I forgot to add the chocolate chips so we sprinkled them on top instead. Always an improvement for the next time. So, if we do this again,

next time, I will add the chips before spinning. Questions 1. Saltwater is a homogeneous mixture.

A homogenous mixture is defined by our text as a solution with uniform composition throughout the sample. A heterogeneous mixture is defined by our text as mixture that does not have uniform composition. (Page 57) 2. The ice cream was a homogeneous mixture and each of the ingredients was uniform throughout. If I would have added the chocolate chips, it would not have been uniform and would have been considered a heterogeneous mixture. 3. The saltwater solution from my large bowl was unsaturated. This time as well, there was no undissolved salt remaining in the bowl and I could have added much more salt to the water.