How to make Ice cream

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First Step : Ingredients (Reactants)

Here is a a list of ingredients that were gonna be using in order to make ice cream at home

- Milk
- Sugar
- Vanilla Extract
- Ice
- Ice cream Salt

Second Step : Combing Ingredients

Now that we have gotten all of the ingredients that we need we can now start to make the ice cream. First we're gonna need to combine all the ingredients together. So we are gonna mix the liquid ingredients first and then put it inside a ziplock bag. Then were going to add the ice cream salt and ice in another ziplock bag that's bigger than the ziplock bag holding our wet ingredients.

Step 3 : Making the actual Ice cream

We’ve done all the other steps and now we have these two ziplock bags. What we’re gonna do now is put the ziplock bag holding the wet ingredients inside of the ice and ice cream salt bag. Once you’ve done that you can start to shake the bag to make the process go by faster. Then after you’ve done it for a bit you may open the ziplock bag and see that your ingredients are turning into ice cream.

Why this happens (Science behind it)

After you finished making this you may wonder to yourself why or how this happened. Well this happened because of something called a chemical reaction which means a process in which one or more substances are converted to one or more different substances. Which basically means that the original ingredients turning into ice cream. Also the salt played a big part in the process as well. The salt made the substance (wet ingredients) hit its freezing point which means it turned into a solid (ice cream). The process of the wet ingredients becoming a solid is an example of freezing point. Another big thing that played in this happening was heat, you may be wondering how that makes sense. But ice must absorb energy in order to melt, so heat is transferred to the ice making the ingredients cooler.

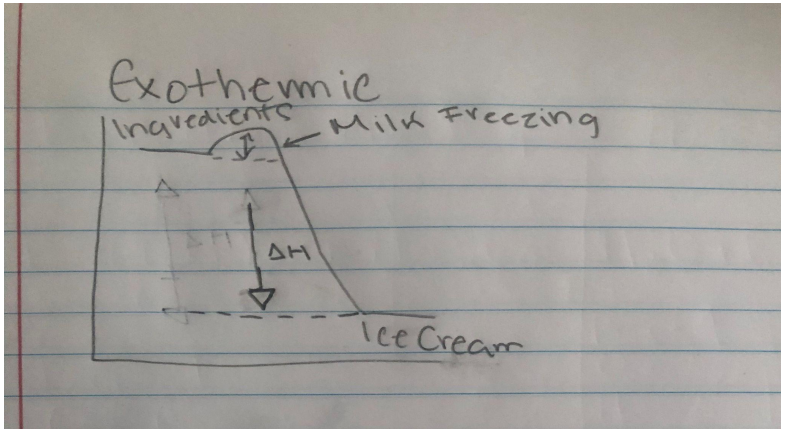
What is Exothermic and Endothermic

Exothermic is a chemical reaction that releases heat into its environment.

Endothermic is a chemical reaction that absorbs heat from its environment.

Enthalpy Change : Exothermic

The first diagram is Exothermic, This is showing you how enthalpy change happened while creating ice cream. For exothermic the enthalpy change is the milk freezing, this is due to it hitting its freezing point and it being on its steps to becoming ice cream.



Enthalpy Change : Endothermic

The next diagram is Endothermic, the enthalpy change for this one is the ice being added to ice to have a reaction. This reaction is to make things cooler with the salt and ice so the ingredients turn into ice cream. The ice and salt being mixed is allowing it to hit its freezing point.