



WELCOME to my Ice Cream Shop!!

Lets learn about the science of making ice cream!!!  
By Vivian Lopez

### Ingredients (reactants)

- Sugar
- Milk
- Heavy Cream
- Vanilla Extract
- Ice
- Salt

### What is a chemical reactions?

A chemical reaction is when one or more substances, which are the reactants, are changed into one or more other substances, the products.

### Why is rock salt important in making ice cream?

The salt is important when making ice cream because it makes the freezing point of the ice lower which then eventually makes the ice cream.

### What is freezing point and freezing point depression?

The freezing point is the temperature in which a liquid melts and the freezing point depression is when two combined substances have a lower freezing point than they will if they were separated. For example the salt makes the freezing point of the ice lower but without the salt it would freeze at a higher temperature.

What role does heat play in making ice cream?

Heat plays a role in ice cream making because the heat from the environment is transferred into the ice and then it helps with combining the ice cream mixture.

What does endothermic and exothermic mean?

Endothermic means that the energy in something is more supplied than released and exothermic means that there is more energy being released than supplied

What reaction in making ice cream is endothermic?

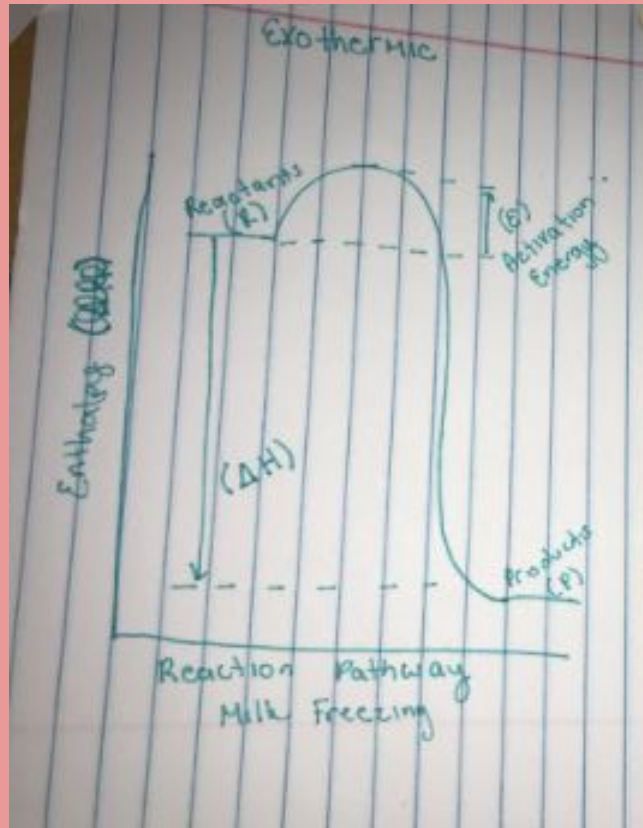
The endothermic reaction is when the ice reacts with the salt and it turns colder.

What reaction in making ice cream is exothermic?

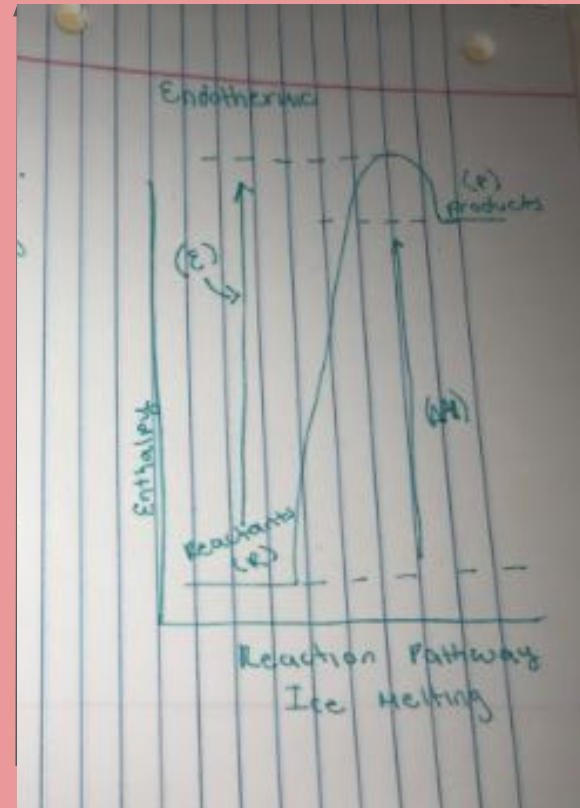
The exothermic reaction is when the milk freezes.



## Exothermic -



## Endothermic



# Vivian's Icecream

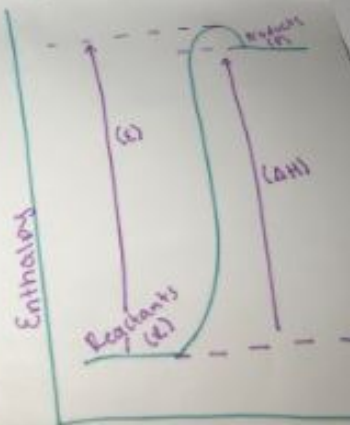
Flavors:

- ♡ Chocolate
- ♡ Cheese cake
- ♡ Vanilla
- ♡ Rocky Road
- ♡ Strawberry
- ♡ Superman

What is the science behind  
Ice cream making?

Exothermic

Endothermic



Reaction Pathway  
(Milk Freezing)

Reaction Pathway  
(Ice melting)

What do the Enthalpy Diagrams show?

Enthalpy diagrams show what is happening to the energetics of a chemical reaction.

