

ICE-CREAM

Focus: Chemistry

Just like we use salt on icy roads in the winter, salt mixed with ice causes the ice to melt. When salt comes into contact with ice, the freezing point of the ice is lowered. By lowering the temperature at which ice is frozen, we are able to create an environment in which the milk mixture can freeze. The fat particles in the milk smash into each other and make big molecules of ice cream!



To investigate the impact of salt on the freezing point of water.

Equipment:

- Measuring jug
- 125cm³ milk
- 125cm³ whipping cream
- 50g sugar
- 1/4 teaspoon vanilla essence
- 75g salt
- approx. 750cm³ of ice.
- large ziplock bag
- small zip lock bag
- gloves
- washing up bowl
- Kitchen scales
- spoon, bowl and toppings
- selection of fruit pieces

Instructions:

1. Place the small zip lock bag into a bowl on the scales and set the balance to 0.00g.
2. Add 50g sugar, 125cm³ cream and 125cm³ milk into the small bag.
- 3. Seal the bag.**
4. In the larger bag place the ice.
5. Measure 75g of salt and place into the large bag containing the ice.
6. Place the sealed small bag inside the larger bag containing ice and salt then seal the larger bag.
7. Over a washing up bowl. Gently rock the large bag from side to side (hold it by the top seal / use gloves so you do not damage your hands).
8. Rock for 20-25 mins or until the contents have solidified into ice cream.
9. Once the ice cream has solidified, open the large bag, remove the smaller bag, open and serve the contents.
10. Add toppings, if you wish, and enjoy!
11. The ice can be placed in the sink to melt, do not touch the ice with your bare hands.

Discuss:

1. Does anything happen to the texture or the ability of the ice cream to freeze by adding fruit?
2. Does the type of fruit change the texture of the ice cream?



Tweet or email your conclusions or your findings to:

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