

Kitchen Chemistry

Candy Chromatography

Materials:

1. M&Ms, Skittles, or any other candy that you want to test (try multiple colors for best experimentation)
2. one piece of .5 inch x 4 inch filter paper for each piece of candy you want to test (cutting up coffee filters works well)
3. Dixie cups (typically 4 candy tests per cup plus one for extra water)
4. 0.01% salt solution (cup of water with a pinch of salt)
5. plastic spoon
6. pencil

Procedure:

1. Coat each Dixie cup with a thin layer of salt solution
2. Using a pencil, label top of filter strips according to type of candy and color
3. Using spoon, place one tiny drop of water near the bottom of the filter strip
4. Coat salt water on one piece of candy that corresponds to filter strip
5. Rub wet side of candy on the wet spot of filter paper, leaving a coating of dye
6. Place bottom of filter strip in correct cup of salt solution and let the water spread past the dye
7. Make sure to fold the filter paper over the top of the cup to keep it from falling into the cup
8. Repeat for all pieces of candy. Be sure to try different colors and types, and compare your results!
9. Let sit and observe results

What's Going On?

Try to answer these questions about the experiment you just completed!

1. What caused the dyes to travel up the filter paper?
2. Which dye colors separated into their different parts? What were they?
3. Which dye colors didn't separate? Why?
4. What can color chromatography be used for?

Iron In Cereal

Materials:

1. Total® brand cereal, or other high iron content breakfast cereal
2. Mixing bowl
3. Plastic or glass rod
4. Large spoon
5. Magnets
6. Zip-lock bags (optional)

Procedure:

1. Pour entire box of cereal flakes into a large bowl
2. Mash the flakes into small pieces
3. Add water and stir
4. Continue adding water to keep the mixture thin and soupy
5. Tape a small magnet to the end of a pencil
6. Stir cereal and water mixture with the magnet for a few minutes
7. When you pull the magnet from the cereal soup, small bits of iron will have collected on it!

What's Going On?

See if you can answer these questions about the experiment you just completed!

1. Why did the iron attract to the magnet?
2. What made the iron come out of the cereal?
3. Was the iron in the cereal actually pure iron? Where else can we find the same iron?
4. Why is it important that we eat cereal and other foods with iron in them?
5. Try this experiment with different types of cereal. Which cereals have more iron?

<http://www.mcrel.org/whelmers/whelm07.asp>

Making Butter!**Materials:**

1. Large clear jar with a lid
2. Plastic marble
3. Heavy cream

Procedure:

1. Pour heavy cream into jar
2. Drop marble into jar and put lid on tight
3. Shake the jar for about ten minutes, or until the butter has separated from the buttermilk
4. Enjoy the butter you have just created on a piece of bread or a muffin!

What's Going On?

See if you can answer these questions about making butter!

1. What did the heavy cream separate into? Were these solids, liquids, or gases?
2. What was the butter made of?

<http://pbskids.org/zoom/activities/sci/butter.html>