

READING

Read the text and answer the question. How do chemistry and food combine?

Experiment with Food Chemistry

Chemistry can be fun and easy, especially if you use it to create beautiful things that you can eat! Here is a food experiment that both kids and adults can have fun with at home.

Stained Glass Sugar

Ingredients

1¾ cups of sugar
thermometer
1 cup of water
½ cup of light corn syrup
⅛ teaspoon of cream of tartar

Other Items

food coloring
a foil baking pan
vegetable oil
cooking spray



Instructions

- 1 Mix all ingredients.
- 2 Heat the mixture slowly and stir it. Spray the baking pan with the cooking spray.
- 3 When it boils, put the thermometer in the mixture and stop heating it at 149°–154°C.
- 4 Pour the mixture into the baking pan and spread it over the bottom of the pan.
- 5 Put drops of food coloring on the mixture and spread them with a spoon.
- 6 Let the mixture cool and take your beautiful stained-glass sugar out of the pan!

This experiment works because the high temperature forms crystals of 99% sugar. The corn syrup holds the sugar molecules in suspension, and the cream of tartar separates the sugar molecules into glucose and fructose. When the mixture cools, it looks like stained glass.

boil (v): to generate bubbles of vapor when a liquid is heated

foil (n): a light metal

VOCABULARY

Match the words to the definitions.

- | | |
|--------------------|--|
| 1 crystal _____ | a a type of sugar in fruits and honey |
| 2 molecule _____ | b a liquid with very small pieces of solid material |
| 3 suspension _____ | c a solid material that has a regular shape with many sides |
| 4 glucose _____ | d the smallest part of an element; it has two or more atoms |
| 5 fructose _____ | e a type of sugar that is produced in plants and animals' bodies |

COMPREHENSION

Number the instructions 1–6 in the order of the recipe.

- _____ Pour the mixture into the baking pan and spread it.
- _____ Let the mixture cool and then take it out of the pan.
- _____ Mix the ingredients.
- _____ Add drops of food coloring and spread them.
- _____ Heat the mixture slowly and stir it. Spray the cooking oil onto the baking pan.
- _____ Put the thermometer in the mixture when it boils.