STAINED GLASS SUGAR

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STAINED GLASS SUGAR

Create gorgeous sugar glass from Imperial Sugar and Dixie Crystals with the Stained Glass Sugar experiment.
Sugar is tasty, but it can also be beautiful. Learn about awesome science like crystallization while creating a delicious and colorful treat! Stained Glass Sugar takes a tried and true recipe for sugar glass and creates vibrant, edible stained glass. The recipe is simple and easy, but by the end you’ll have made sugar glass that’s awesome.

Materials
• Granulated sugar (we found the best results using Imperial Sugar and Dixie Crystals)
• Stovetop-safe container
• Food coloring
• Cream of tartar
• Candy thermometer
• Light corn syrup
• Measuring utensils
• Aluminum foil pan
• Water
• Stove or burner

EXPERIMENT
1. Measure out the following:
   - 1 and 3/4-cups of sugar
   - 1 cup of water
   - 1/2-cup of corn syrup
   - 1/8 tsp cream of tartar
2. Combine all the ingredients in a pan or stovetop-safe container.
3. Slowly heat the mixture to a low boil while stirring, preventing the sugar from caramelizing. Be sure not to heat the sugar to fast!
4. Keep the mixture at a low boil and place a candy thermometer in the container. Keep the mixture boiling until the temperature reaches 300°F. While you’re waiting, you can prepare a foil pan with cooking spray, if desired.
5. Carefully pour the mixture into the foil pan.
6. Add food coloring to the pan as wanted and spread the colors.
7. Let the mixture cool until hardened.
8. Carefully remove your Stained Glass Sugar from the pan.

HOW DOES IT WORK?
So you’ve made a beautiful, delicious work of art with Stained Glass Sugar, but do you know how it works?
Stained Glass Sugar, or sugar glass, is created when you dissolve sugar into water and heat it to 300°F (150°C). This is called the “hard crack” stage of candy making. Think about it! Just like glass, this candy is hard and cracks. Makes sense, right? The addition of corn syrup to the mix prevents the sugar from recrystallizing in the mixture. Corn syrup prevents the sugar molecules in the mixture from bonding and forming the crystals you originally mixed. The last additive, cream of tartar, separates the original, complex sugar crystals into glucose and fructose, simple sugars.
Finally, adding in food coloring prior to the mixture’s hardening creates the “stained glass” look that you were promised. Light passing through the translucent sugar glass and food coloring will take the colors of the food coloring you choose!

Did You Know?
Have you ever watched a movie where glass was broken? A lot of that broken glass was probably sugar glass. Sugar glass can look and break just like real glass, but it’s way cheaper! Also, you could do an entire glass clean up by letting goats onto the set!
HERE IS WHAT YOU NEED

GRANULATED SUGAR
WE FOUND BEST RESULTS WITH IMPERIAL SUGAR AND DIXIE CRYSTAL
STOVETOP SAFE CONTAINER
FOOD COLORING
CREAM OF TARTAR
CANDY THERMOMETER
LIGHT CORN SYRUP
MEASURING UTENSILS
ALUMINUM FOIL PAN
WATER
STOVE OR BURNER
1. Fill the glass with water.

Measure out each of the ingredients as noted below:

- 1 3/4 cups sugar
- 1 cup water
- 1/2 cup corn syrup
- 1/8 tsp cream of tartar
2. Combine all ingredients in a pan or stovetop safe container.

3. To prevent the sugar from caramelizing slowly heat the mixture to a low boil while stirring.
4

KEEP THE MIXTURE AT A LOW BOIL AND ADD A CANDY THERMOMETER
Prepare a foil pan with cooking spray if desired.

Keep boiling until the temperature reaches 300°F.
5. Carefully pour the mixture into the foil pan.

6. Add food coloring.
SPREAD AROUND THE PAN
CAREFULLY REMOVE YOUR STAINED GLASS SUGAR FROM THE PAN
How does the temperature of the mixture affect the result?