

Exp!ore Lab Science

Gummy Bear Edible Slime/Playdough

Gummy candy is made specifically out of gelatin which makes the gummy elastic in texture. The primary characteristics of gummies are the use of stabilizers which interacts with the sugar molecules to form a 3-D network to hold the fluid sugar solution.



Heat + Cornstarch + Powder sugar



Ingredients:

- ½-¾ cup of Gummy Bears
- 2-4 Tablespoons Cornstarch
- 1-2 Tablespoons powdered sugar

Procedure:

1. Separate the gummy bears by color and microwave in a microwave safe bowl for 15 seconds then stir (Melt another 10 seconds at a time until a smooth consistency).
2. Add the cornstarch and powdered sugar while stirring (if too sticky, add more cornstarch and powder sugar).
3. Knead with hands and play or eat it (If it starts to harden, place in microwave for 6-8 seconds for it to stretch again).

Science Behind It!

Gelatin is a hydrocolloid which are used as thickeners in food. In this case it traps the fluid sugar syrup to give a semi-solid texture. The sweeteners

used in gummies are most commonly sucrose and corn syrup and may impact the gelation properties. The addition of sweeteners may contribute to the increase of melting point and may melt faster than other gummy candies. As you can see, gelatin is heat sensitive as it melts easily in the microwave and when it cools it solidifies. The addition of corn starch to the mixture gives it a soft and easy to eat texture. The corn starch when added to the heated solution forces the molecules to move closer together to solidify and becomes viscous.



Citation:

Hartel, R. W., & Hartel, A. (2014). *Candy bites: The science of sweets*. New York: Springer, Copernicus Books.