

# Gummy Candy

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## Procedure 1: Basic Gummy Candy

### Materials Needed

- 3 packets gelatin (Knox® unflavored gelatine)
- 3 Tablespoons flavored gelatin dessert (such as Jell-o®)
- ½ cup water (room temperature)
- Candy molds (Available at craft stores or purchase on the Internet.)
- Microwave safe bowl or small saucepan

Optional: For sour gummy candy, add ¼ teaspoon citric acid (available from natural food stores)

### Safety

Safety glasses or goggles must be worn in the laboratory at all times.

This experiment is best performed at home or in a home economics laboratory. If this experiment is performed in a chemistry laboratory, all work surfaces must be cleaned and free from laboratory chemicals. After cleaning work surfaces, it is advised to cover all work areas with aluminum foil or a food-grade paper covering.

All glassware and apparatus must be clean and free from laboratory chemicals. Use only special glassware and equipment, stored away from all sources of laboratory chemical contamination, and reserved only for food experiments is recommended.

There are no safety hazards associated with the materials used in this experiment.

The materials prepared in this experiment will be hot. Wear a hot mitt or use pot holders when handling hot bowl or any of the mixtures prepared.

## **Disposal**

Generally, all waste materials in this experiment can be disposed in the trash or poured down the drain with running water. All disposal must conform to local regulations.

## **Procedure**

In most cases, the candy molds can be used without any preparation. If desired, a very light coating of cooking spray can be used to prepare the molds.

Place the gelatin and the Jell-o® into the small bowl. Add the water. Stir to form a smooth paste.

If sour gummy candy is desired, add  $\frac{1}{4}$  teaspoon of citric acid. (After you have prepared one batch of gummy candy, you may alter the amount of citric acid to your taste.)

Place the bowl and its contents into a microwave oven. Heat for about 1 minute or until the mixture starts to boil. (Note: Heating can be done in a small saucepan.)

Let any foam subside. Then, use a small spoon or a gravy baster to transfer the mixture to the candy molds. CAUTION: The hot mixture may squirt from the gravy baster.

Allow the gummy candy molds to set for about 30 minutes, then place the molds in the refrigerator to harden. This will take approximately one hour.

Remove the gummy candy from the molds and enjoy them.

These are best stored in a plastic bag or a sealed plastic storage container in the refrigerator. If left uncovered in an open room, they will dry out.

Note: If two color gummy candies are desired, partially fill the molds with the gummy mixture and allow them to set for one hour. Add the second color to fill the remainder of the mold and place back into the refrigerator.



## Explanation

Gummy candies are normally made using corn syrup, sugar (both sucrose and dextrose), gelatin, citric acid, and corn starch along with flavors and coloring agents. The final gummy candies are polished with carnauba wax, and beeswax. This recipe does not use corn syrup, resulting in a slightly harder gummy candy.

Commercial gelatin desserts, such as Jell-o<sup>®</sup>, contain approximately 86% sugar, so additional sugar is not needed. The tartness is provided by adipic and fumaric acids with a small amount of disodium phosphate and sodium citrate to buffer (or control) the acidity. Additional acidity (sourness) can be provided by adding a small amount of citric acid. Also, there is sufficient food color in the commercial gelatin dessert so additional food color is not needed.

## Procedure 2: Gummy Candy

### Materials Needed

3 packets gelatin (Knox® unflavored gelatine)  
3 Tablespoons flavored gelatin dessert (such as Jell-o®)  
3 Tablespoons corn syrup (Light Karo syrup)  
½ cup water (room temperature)  
Candy molds (Available at craft stores or purchase on the Internet.)  
Microwave safe bowl or small saucepan

Optional: For sour gummy candy, add ¼ teaspoon citric acid (available from natural food stores)

### Safety

Safety glasses or goggles must be worn in the laboratory at all times.

This experiment is best performed at home or in a home economics laboratory. If this experiment is performed in a chemistry laboratory, all work surfaces must be cleaned and free from laboratory chemicals. After cleaning work surfaces, it is advised to cover all work areas with aluminum foil or a food-grade paper covering.

All glassware and apparatus must be clean and free from laboratory chemicals. Use only special glassware and equipment, stored away from all sources of laboratory chemical contamination, and reserved only for food experiments is recommended.

There are no safety hazards associated with the materials used in this experiment.

The materials prepared in this experiment will be hot. Wear a hot mitt or use pot holders when handling hot bowl or any of the mixtures prepared.

### Disposal

Generally, all waste materials in this experiment can be disposed in the trash or poured down the drain with running water. All disposal must conform to local regulations.

### Procedure

In most cases, the candy molds can be used without any preparation. If desired, a very light coating of cooking spray can be used to prepare the molds.

Place the gelatin and the Jell-o® into the small bowl. Add the water. Stir to form a smooth paste. Add the Karo syrup.

If sour gummy candy is desired, add ¼ teaspoon of citric acid. (After you have prepared one batch of gummy candy, you may alter the amount of citric acid to your taste.)

Place the bowl and its contents into a microwave oven. Heat for about 1 to 1 ½ minutes or until the mixture starts to boil. (Note: Heating can be done in a small saucepan.)

Let any foam subside. Then, use a small spoon or a gravy baster to transfer the mixture to the candy molds. CAUTION: The hot mixture may squirt from the gravy baster.

Allow the gummy candy molds to set for about 30 minutes, then place the molds in the refrigerator to harden. This will take approximately one hour.

Remove the gummy candy from the molds and enjoy them.

These are best stored in a plastic bag or a sealed plastic storage container in the refrigerator. If left uncovered in an open room, they will dry out.

Note: If two color gummy candies are desired, partially fill the molds with the gummy mixture and allow them to set for one hour. Add the second color to fill the remainder of the mold and place back into the refrigerator.

## **Explanation**

This recipe uses corn syrup, resulting in a slightly softer gummy candy than Procedure 1, above. Addition of too much corn syrup will result in a longer curing period.