

GINGER ALE

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Materials Needed

Ginger root
sucrose, cane sugar
yeast, champagne, beer, or wine yeast preferred. If not available, an active dry yeast such as Red Star will also work.
grater
cheese cloth
large funnel or strainer
bottles and bottle caps. Reusable beer bottles or PET 1-L or 2-L soft drink bottles.
large pot or container, to hold 1 gallon of liquid
measuring spoons
measuring cup, quart size

Safety

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

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.

Use only bottles that are rated for holding a pressurized liquid, such as reusable beer bottles (not the disposable type). Bottles must be inspected for chips or cracks and any defective bottles should be discarded. Bottles can explode if the pressure becomes too great.

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

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

This procedure makes one gallon of ginger ale.

Thoroughly clean the bottles to be used to hold the ginger ale. For glass bottles, use of a dishwasher with a sanitary cycle is recommended.

Grate the peeled ginger root. You will need 2 Tbs. of the grated ginger root.

Add the ginger to two quarts of water in a large pot. Bring the water to a boil and simmer for 10 minutes. Cover and allow the liquid to cool to at least 37°C (98°F).

Strain the ginger solution through several layers of cheese cloth in a large funnel or a large strainer.

Dissolve 1/4 tsp. of yeast in one cup of warm water (37°C or 98°F). Let this stand for 5 minutes. The mixture should bubble and become thick.

Dissolve 454 g (2 cups) sugar in the ginger solution.

Add the yeast mixture to sugar-ginger solution. Stir well.

Add additional water to a total volume of 1 gallon. Stir well.

Fill sterilized bottles, leaving one to two inches of air space at the top. Seal the bottles.

Lay the bottles on their side. Check for leaks. Age for 3 to 4 days at room temperature.

After the initial aging, move the bottles to a cool place. They may be refrigerated at this time.

After one week of aging (total), the ginger ale is ready to drink. When serving, pour carefully so as not to disturb the sediment of yeast on the bottom of the bottle. The sediment is not harmful, but may give an off flavor.

The flavor will continue to improve if the ginger ale is aged for a second week.

VARIATIONS:

Low Calorie Ginger ale

Prepare one gallon of mix, as described above, without adding any sugar. Add artificial sweetener to taste. Add 6 Tbs. sugar. Stir well and bottle. The sugar will be consumed by the yeast during the aging process.

Instant Ginger ale

Prepare one gallon of mix, as described above, the following changes:

Reduce the sugar to one cup (or artificial sweetener to taste).

Do not add any yeast.

Add several pieces of dry ice to the mixture in an *open* container. The ginger ale should be ready to drink in about 5 minutes.

Instant Ginger ale

Pour the mixture into a soda siphon bottle. Pressurize with carbon dioxide according to the directions that come with the bottle. Chill before serving.