

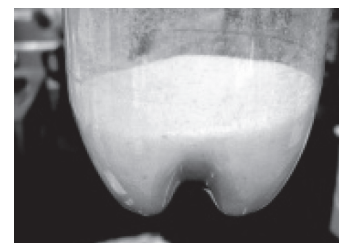
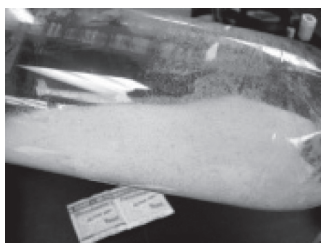
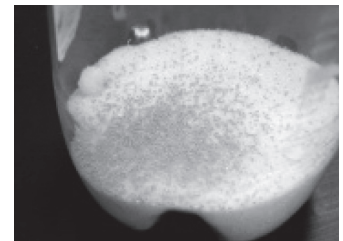
How to Make Root Beer

Making root beer is easy once you gather all the necessary supplies. It's a great family project and a way to teach the younger ones that not everything tasty comes from an aluminium can. And it's delicious, too!

Things You'll Need for Yeast Root Beer

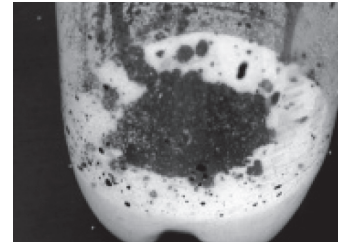
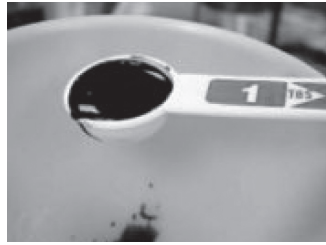
- clean 2 liter plastic soft drink bottle with cap
- funnel
- 1 cup measuring cup
- 1/4 tsp measuring spoon
- 1 Tbl measuring spoon
- cane (table) sugar [sucrose] (1 cup)
- Zatarain's Root Beer Extract (1 tablespoon)
- powdered baker's yeast (1/4 teaspoon) (Yeast for brewing would certainly work at least as well as baking yeast.)
- cold fresh water

1. Using a clean bottle and a dry funnel, add the ingredients in sequence as stated in the steps that follow. First add a level cup of table sugar (or cane sugar). Adjust the amount to achieve the desired sweetness.
2. Measure out 1/4 teaspoon powdered baker's yeast and pour it in the funnel. The yeast should be fresh and active, and any brand that is available will work.
3. Shake well to make sure that the yeast grains are distributed evenly into the sugar.
4. Swirl the sugar/yeast mixture in the bottom of the bottle in order to make it concave and enable it to catch the extract in the middle.
5. Replace the funnel and add 1 Tbsp of root beer extract on top of the dry sugar. Notice how the extract sticks to the sugar. This will help dissolve the extract as seen in the next few steps.
6. Fill the bottle halfway with fresh cool tap water that has only a little chlorine. (Pour through the funnel and use this opportunity to rinse extract stuck to the funnel and

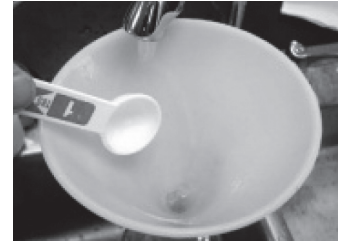


tablespoon.) Swirl to dissolve the ingredients.

7. Fill the bottle to the neck, this time with fresh water, leaving only about an inch (2.54cm) of head space. Securely screw the cap to seal the bottle. Invert repeatedly to thoroughly dissolve the contents.



8. Place the sealed bottle at room temperature for about three or four days until the bottle feels hard to a forceful squeeze. Then move it to a cool place (below 65 F (18 C)). Refrigerate overnight to thoroughly chill before serving. Crack the lid of the bottle just a little to release the pressure slowly.



Tips:

- There will be a sediment of yeast at the bottom of the bottle, so that the last bit of root beer will be turbid. Decant carefully if you wish to avoid this sediment.
- Fermentation has been used by mankind for thousands of years for raising bread, fermenting wine and brewing beer. The products of the fermentation of sugar by baker's yeast *Saccharomyces cerevisiae* (a fungus) are ethyl alcohol and carbon dioxide. Carbon dioxide causes bread to rise and gives effervescent drinks their bubbles. This action of yeast on sugar is used to 'carbonate' beverages, as in the addition of bubbles to champagne.
- Artificial sweetener cannot be used to replace the sugar. Sugar is required for yeast to generate carbon dioxide which carbonates the beverage. No sugar, no carbonation. You might experiment with less sugar, and add a substitute to make up for the lower sweetness, but it is not known just how little you can add and still get adequate carbonization.
- Use bottled water instead of tap.



Warnings:

- Do not leave the finished root beer in a warm place once the bottle feels hard. After a couple weeks or so at room temperature, especially in the summer when the temperature is high, enough pressure may build up to explode the bottle! There is no danger of this if the finished root beer is refrigerated. Move to a refrigerator overnight before opening.
- There might be alcohol in this home made soft drink. The alcoholic content which results from the fermentation of this root beer has been found, through testing, to be between 0.35 and 0.5 %. Comparing this to the 6% in many beers, it would require a person to drink about a gallon and a half (5.7 L) of this root beer to be equivalent to one 12 ounce (355 mL) beer. It can be said that this amount of alcohol is negligible, but for persons with metabolic problems who cannot metabolize alcohol properly, or religious prohibition against any alcohol, consumption should be limited or avoided. However, there are many high school biology labs who have made this beverage without any problems.