

## Brewing Root Beer

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### HISTORY

The first documented evidence of the production of “root beer” was in the American colonies. Prior to that, sassafras was being shipped back to Europe after the New World was discovered. I have not found any evidence of root beer being made with it, only tea, and mead. (I have found one instance in Digby’s The Closet Opened where sassafras is an ingredient).

Historians often credit Charles Hires with creating the root beer flavor we know today, but I believe that he simply made it popular. Here is a list of ingredients and countries from a 1922 pamphlet about Hires Root Beer.

Birch Bark - United States, New England	Chirreta – India
Dog Grass – Germany	Ginger – Africa
Ginger – China	Ginger – Jamaica
Hires special plant	Hops – United States, Northwest
Juniper Berries – Italy	Licorice – Spain
Licorice – Russia	Sarsaparilla – Honduras
Sugar – Cuba	Vanilla – Mexico
Wintergreen – United States, North Carolina	Yerba Mate, Brazil

In 1960 the FDA outlawed sassafras because it contains safrole, which was proven to cause cancer in lab rats. The primary element in the root beer flavor we know today is wintergreen.

There are two ways to make root beer. Use an extract or make it from scratch.

### HOW TO MAKE ROOT BEER FROM EXTRACT

Step #1 - Buy some root beer extract. Don't get that stuff on the grocery store shelves, but go to your brewing supply store. . A good source of quality root beer extract is Hop Tech (a home/micro/pub brewery supply store). They have two styles of root beer extract, both made from natural ingredients. Their web site is at <http://www.hoptech.com>

Step #2 - Follow the instructions on the extract bottle. Generally it is something like dissolving 4 pounds of sugar into 5 gallons of boiling water, and then adding the extract. Feel free to experiment by adding/subtracting a little sugar/extract. Nor do you have to stick with plain old table sugar (sucrose, made from sugar cane and/or beets). You can use corn syrup, which may produce a cleaner taste than table sugar when it goes through the fermentation process (this is why brewers sometimes use it when making beer). You can also try fructose, which is sweeter than other sugars, and this means you can use less sugar to produce the same sweetness with fewer calories (also used by brewers). Furthermore, if calories are a factor, then you might also want to use a combination of Sweet-n-Low or aspartame (NutraSweet, Equal) and fructose to further reduce calories - it will taste 1000% better than store bought low calorie root beer. You might also want to experiment with honey, molasses, brown sugar, or malt extract (maltose) as a sweetener and flavoring component. Water is also important, if you don't like the way your tap water taste, then use bottled water (but not distilled water).

Step #3 - Fermentation time. This article is going to assume you are going to ferment your root beer, but it is also possible to force carbonate instead. For right now though, we'll just stick to fermentation. It is the process of fermentation that puts the little bubbles, carbon dioxide, into the root beer. It is also pretty simple to accomplish. Pour your flavored sugar water into a bucket that can be covered, and then add a package of ale yeast when the liquids temperature is warm (about 75 degrees F.). Over the next 12 hours the yeast will start eating the sugar and huge amounts of carbonation and foam will result and then subside. Now it is time to bottle. But before we bottle, just a couple notes. Do NOT use champagne yeast, which is often recommended by root beer manufacturers and books written 20 years ago (I'll explain why under the bottling section). The type of yeast that you use will

substantially effect the final flavor, so experiment. Liquid yeast costs a lot more, but tastes much cleaner and should probably be used if you're making a traditional root beer from natural ingredients. Hop Tech, mentioned above, has a full line of yeast - just remember to use **ale** yeast. One thing that must be followed strictly is to **KEEP EVERY THING CLEAN**. Bacteria can easily contaminate your root beer and make it really nasty (I am understating the importance of this - please keep everything clean). Along the same lines, don't leave your root beer exposed to air, keep it covered, or bacteria will get into it. Now, a note on tradition, fermenting root beer was how things were originally done. By 1866 (and probably much earlier), even though carbonation by fermentation was still popular, it was not uncommon to force carbonate.

Step #4 - Let's get this stuff bottled. After the initial carbonation subsides, about 12 hours, you can start bottling. Once again, any homebrew supplier can help. You will need a bottle-filler, which is much easier than a funnel, and keeps your root beer from being exposed to air. You will also need some bottles. Make sure all bottles are clean (you have to guard against bacteria). Now all you have to do is transfer the root beer to the bottles. You will need to keep an eye on the bottles.

### **HOW TO MAKE THE ROOT BEER FROM SCRATCH**

You don't want to use the extract do you? You want to make root beer from scratch don't you? Well, here is how to do it. Do **NOT** use sassafras that still has safrole because it is a carcinogen (it causes cancer). The first thing you need to do is gather your roots, barks, and herbs. What do you gather? The Hires root beer recipe is a great source, but there are a couple of items that you must have, and a few that you should have.

Must Have:

Vanilla (use real vanilla, but not the bean)

Wintergreen

Should Have:

Ginger

Licorice

Sarsaparilla

The actual amounts that you use are up to you, but it is generally an ounce of each ingredient. Wintergreen is the main ingredient used in root beers today, so more Wintergreen and less other ingredients for a post 1960 tasting root beer (2½ oz. Wintergreen ¼ oz. other ingredients). A little later I'll provide you with a real root beer recipe used in the 1890's, and it includes exact measurements. When the roots are gathered they should be rinsed in clear water. All dirt and tops should be removed. Roots that are heavy should be cut or split. When it comes to barks care should be taken that the woody part is removed. The inner skin is the part of the bark that will be used. Herbs & leaves must be gathered when the plant is in seed or flowering stage. When gathering herbs, the plant must be cut where the first leaf begins to branch out. When we state leaves, it is the leaves only that is wanted. After washing, these items should be laid out to dry, and care should be taken so that they are spread out where the air can get around them to prevent molding. Or go buy them at a health food store.

Now just boil the ingredients for about 30 minutes, remove the roots and herbs, and proceed to the fermentation stage described earlier. Vanilla beans contain very tiny seeds, so don't use the bean unless you're prepared to filter the liquid first (boiling the bean without slicing it open doesn't provide enough flavor).

A couple of recipes:

Sarsaparilla mead: 1 lb. Spanish Sarsaparilla, boiled in 4 gal water for 5 hours. And add enough water to have 2 gal. Add 16 lb. sugar, and 10 oz. tartaric acid. To make a tumbler of it, take 1/2 wine glass of above mix, add water to fill tumbler and add 1/2 tsp. soda (baking soda)- Beecher's Receipt Book 1857

Root Beer (Medicinal): For each gal. of water take hops, burdock, yellow dock, sarsaparilla, dandelion and spikenard roots, bruised of each  $\frac{1}{2}$  ox. Boil about 20 min, and strain while hot. Add 8-10 drops of oils of spruce and saffras mixed in equal proportions. When cooled to a warm temp add 2-3 tbsp. yeast, molasses  $\frac{2}{3}$  pint, or white sugar  $\frac{1}{2}$  lb.. Put the mix into a jar, with a cloth covering it, let it work for 2-3 hrs, then bottle and set in a cool place.- Dr. Chase's Recipes 1869

My recipe:

Approximately 2 oz Sarsaparilla  
Approximately 2 oz Sassafras  
Approximately  $\frac{1}{2}$  oz licorice  
2 oz Wintergreen leaves  
2  $\frac{1}{2}$  pounds sugar  
2 gallons water.

I started the water boiling and added all the ingredients.. When it cooled, I use Munton & Fisson Ale yeast.