Soft Drink Formula

Version 1.1.3

Disclaimer:

Making soft drinks is not for the faint of heart, nor the dirty of finger. It is a solemn enterprise not to be entered into lightly, as with marriage or buying used farm machinery.

With any food-prep, failure to observe basic hygienic principles, follow directions, and exercise common sense can have grave consequences. OpenCola assumes no liability for any problems that arise out of the use of this document. Proceed at your own risk. No one's putting a gun to your head, so don't bother if you can't boil water.

Improper use of cola might result in blunt trauma, puncture wounds, physical illness, mental illness, caffeine dependency, dental necrosis, acid reflux, death, devastation, and random tax audits. Or it might not.

A list of warnings has been provided below. We did not include them for *our* health – we included them for *yours*. Read them. Know them. Follow them. Tattoo them to your backside.

Just in case you have *any* doubt: following the directions below may be hazardous to your health and property. You assume any and all risk arising from the manufacture and consumption of cola.

An important note: this is *not* the recipe for "OpenCola" – that is, the canned beverage from OpenCola that you may have received at a trade show, or other venue or outlet. Making canned cola requires millions of dollars in abstruse gear and manufacturing gizmos. It's easier to make nerve gas than manufacture cola. This is a kitchen-sink recipe that you can make all on your own. It is *our* kitchen-sink recipe. We figured it out somewhere between coding the COLA SDK and debugging the Linux build of the clerver.

Anyway, we've tried to be nice about the disclaimer. If it's not good enough for you, here's what our lawyers have to say about the whole shootin' match.

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Version History:

1.1.3
2/20/01
Added sterner caffeine warnings, link to Material Safety Data Sheet – thanks to Tom Swulius. Added contributors section.

1.1.2
1/31/01
Fixed Amanda's email address

1.1.1
01/30/01
Even *more* disclaimer, this time to differentiate this recipe from the stuff in the cans.

1.1
01/29/01
Fixed typos. Made disclaimer scarier. Removed snotty references to Americans.

1.0
01/27/01
Original text

Introduction:

Contained hereunder is a HOW-TO for brewing up kitchen-sink OpenCola. Amazingly enough, every soft-drink vendor we spoke to acted like the preparation of cola was some kind of deep, dark trade-seekrut™. With much reverse-engineering and creative shopping, the research kitchens at OpenCola have coopered together the following makefile for brewing up The Black Waters of Corporate Imperialism™ in the privacy of your own home.

The basis for the whole thing is the 7X, Top-Seekrut™ formula. Our sources tell us that 7X is the internal Coca-Cola codename for their syrup. You'll note that the 7X formula contains *eight* ingredients: still more evidence of the deviousness of the Soda Gnomes.

As it turns out, mixing up a batch of cola's pretty easy. Finding the ingredients is damned hard. Most of this file is about finding and handling ingredients so as to produce a tasty bevvy without blowing up your kitchen, melting your flesh off your bones, or poisoning yourself. As with all undertakings of great moment, read and understand the instructions before attempting to commit cola on your own. Pay special attention to the "Warnings" section.

This recipe is licensed under the GNU General Public license. It is "Open Source" Cola, or, if you prefer, "Free" Cola. That means you're free to use this recipe to make your own cola, or to make derivative colas. If you distribute derivative colas, you're expected to send email to the recipe's author, Amanda Foubister (amanda@opencola.com) with your updates. In the future, we expect to have a CVS server up to handle additions, bug-reports, etc.

The Formula

7X (Top Seekrut™) flavoring formula:

3.50 ml orange oil
1.00 ml lemon oil
1.00 ml nutmeg oil
1.25 ml cassia oil
0.25 ml coriander oil
0.25 ml neroli oil

2.75 ml lime oil
0.25 ml lavender oil
10.0 g gum arabic
3.00 ml water

OpenCola syrup:

2.00 tsp. 7X formula
3.50 tsp. 75% phosphoric acid or citric acid
2.28 l water
2.36 kg plain granulated white table sugar
0.50 tsp. caffeine (optional)
30.0 ml caramel color

Preparation

7X Flavoring:

Mix oils together in a cup. Add gum arabic, mix with a spoon. Add water and mix well. I used my trusty Braun mixer for this step, mixing for 4-5 minutes. You can also transfer to a blender for this step. Can be kept in a sealed glass jar in the fridge or at room temperature.

Please note that this mixture will separate. The Gum Arabic is essential to this part of the recipe, as you are mixing oil and water.

Syrup:

In a one gallon container (I used the Rubbermaid Servin' Saver Dry Food Keeper, 1.3 US Gal/4.92 l), take 5 mls of the 7X formula, add the 75% phosphoric or citric acid. Add the water, then the sugar. While mixing, add the caffeine, if desired. Make sure the caffeine is completely dissolved. Then add the caramel color. Mix thoroughly.

Cola:

To finish drink, take one part syrup and add 5 parts carbonated water.

Scavenging and Handling Ingredients

7X flavor:

Measurement: I used a dropper purchased at a Shoppers Drug Mart (normally used to measure infant portions of medicine, I believe).

Oils: Oils can cause skin irritation. Wear latex food-prep or surgical gloves. If oils come in contact with skin, wash with soap and water.

I purchased all oils from health food stores and the herbalist store, Thuna's (see notes on gum arabic).

Everything could have come from the herbalist's. Try for 100 percent pure, undiluted oils. I used oils from the following companies:

- ✍ CK Solutions, Ft. Wayne, IN 46825
- ✍ Aura Cacia Oils, Weaverville, CA 96093

- ✎ Aromaforce Essential Oils
- ✎ Frontier Natural Flavors, www.frontiercoop.com
- ✎ Karooch, Peterborough, ONT K9J 7Y8

When I purchased the oils, I specifically asked whether they were food grade or not. All persons said that they were, one person said she used them internally all the time.

Neroli is a very expensive item, be prepared (US$48.52 for 5.00 ml).

All others were a more reasonable price (US$2-9.30).

Gum Arabic: It is very important that you get only *food-grade* Gum Arabic. There is also an *art-grade*, which is readily available at art supply stores – **never use art-grade Gum Arabic!** Art-grade Gum Arabic is toxic. It will make you ill. You'll be sad. We'll be sad.

I found food-grade Gum Arabic at an herbalist store in Toronto called Thuna's (416) 461-8191. I purchased 112g for US$12.46, which will make more than 11 batches of flavoring formula.

Syrup:

Water: good old tap water will do, if you trust your tap. I used spring water.

75% Phosphoric Acid: Due to its acidity, this product is corrosive to the eyes and skin. Handle with gloved hands, and use extreme caution. If comes in contact with the eyes or skin, immediately flush with plenty of water for at least 15 minutes. Get medical attention. Rinse any spills on clothing or other surfaces thoroughly. Store in a secure area. *Do not* store more than 50.0 ml.

Try finding phosphoric acid at a compounding pharmacy in your area. There are pharmacies that still mix their own individual compounds and still stock phosphoric acid.

Citric acid: Very easy to find. I found mine at a Shoppers Drug Mart (Rougier Pharma Inc, Quebec, Canada J7J 1P3). Says right on the label, "For the preparation of acidulous drinks and effervescing draughts, and preservation of jams and jellies." According to the Coke history book, citric acid was used first in the formula, but they now use the phosphoric.

Sugar: Basic granulated white table sugar found everywhere. Buy from a bulk store to save some money.

Caffeine: It's best not to store caffeine in *any* amount. Caffeine can kill people in relatively small doses. The median lethal dose for an adult human is around 10 grams, or approximately one third of an ounce. You can find out more by reading the Material Safety Data Sheet (MSDS) for caffeine at http://www.jtbaker.com/msds/c0165.htm. Don't yeild to the temptation to create a "Super-Jolt™," adding tons and tons of the white stuff to your cola, our you'll be in a world of hurt. If stored, store in a secure area away from children. Toxic by inhalation and ingestion: If inhaled, remove to fresh air, If ingested, call a physician. Possible teratogen and mutagen. If product comes in contact with the eyes, flush with plenty of water. There is some great information on caffeine and it's over-consumption at http://www.thecaffeinepage.com.

Caffeine is completely optional. I used part of a caffeine pill (MVP, www.mvpnutrition.com), ground up in a pestle with a mortar. According to information on the pill bottle and on the Web site, the pills are 100% caffeine. As an extra safety precaution, I strained all of the syrup through a 4-ply of cheesecloth, in case any of the caffeine wasn't dissolved.

Caramel color: I found mine at a bakery supply store (World of Cake Decorating, 1766 Weston Road, Toronto, Ontario, Canada 416-247-4935). I was originally told to use double strength caramel color, but couldn't find it anywhere (retail or wholesale). It really only adds color, so it makes it a bit paler than we are used to coming out of a can or bottle. No other difference that we could discern during our taste-testing.

Cola:

Soda Water: I purchased a soda charger and CO2 cartridges at Nikolaou's (629 Queen Street West, Toronto, Ontario, Canada 416-504-6411) to deliver the soda charge needed to make the cola fizzy. At testing, no one was impressed. What worked best was adding canned sodium-free (very important!) soda water to the syrup.

If you would like to make soda water yourself as well, here is a recipe from a great Web site on beverages (http://www.upl.cs.wisc.edu/~craft/bar/section7.html):

Soda: Carbonated Water

- ✍ 5 U.S. gallons of water
- ✍ 1.5 cups sugar (or sugar syrup)
- ✍ 1 teaspoon dry bread yeast (rehydrated)

I fill each bottle 2/3 full, screw on the top, and leave for one or two weeks. Each weekend I measure and add the syrup to a few bottles, top them off with water and stick them in the fridge.

This is a very quick operation. I had experimented with adding dry sugar, but this caused an excessive amount of foaming.

Warnings:

These are all associated with each of their ingredients, but they're repeated here just to make sure. We're not making this stuff up. Cola is a harsh mistress, and she is quick to anger. Heed the warnings below or proceed into certain peril.

Oils: Can cause skin irritation. If oils come in contact with skin, wash with soap and water.

Gum Arabic: It is very important that you get only *food-grade* Gum Arabic. There is also an *art-grade*, which is readily available at art supply stores – **never use art-grade Gum Arabic!** Art grade Gum Arabic is toxic. It will make you ill. You'll be sad. We'll be sad.

75% Phosphoric Acid: Due to its acidity, this product is corrosive to the eyes and skin. Handle with gloved hands, and use extreme caution. If comes in contact with the eyes or skin, immediately flush with plenty of water for at least 15 minutes. Get medical attention. Rinse any spills on clothing or other surfaces thoroughly. Store in a secure area. *Do not* store more than 50.0 ml.

Caffeine: It's best not to store caffeine in *any* amount. Caffeine can kill people in relatively small doses. The median lethal dose for an adult human is around 10 grams, or approximately one third of an ounce. You can find out more by reading the Material Safety Data Sheet (MSDS) for caffeine at http://www.jtbaker.com/msds/c0165.htm. Don't yield to the temptation to create a "Super-Jolt™" adding tons and tons of the white stuff to you cola, our you'll be in a world of hurt. If stored, store in a secure area away from children. Toxic by inhalation and ingestion: If inhaled, remove to fresh air. If ingested, call a physician. Possible teratogen and mutagen. If product comes in contact with the eyes, flush with plenty of water. There is some great information on caffeine and it's over-consumption at http://www.thecaffeinepage.com.

Thanks, Acknowledgements and Afterward:

The 7X that I experimented with comes from the great Coke history book, *For God, Country, & Coca-Cola*, by Mark Pendergrast, Basic Books, 1993, 2000, ISBN 0-465-05468-4. I know, I know. I list 8 oils, not 7. It notes in the book that many believe lavender to be part of the 7X formula, so I tried it. We liked it in testing.

Special thanks to Pharmacist David at the IDA (Queen West near Jameson, Toronto) for advice on phosphoric acid and chemistry.

Thanks to Barb Holland and Rose Murray from Foodland Ontario for advice on various ingredients and general soda making.

Contributors:

The following people have contributed refinements to the formula. Thanks to:
Cory Doctorow (cory@opencola.com)
Tom Swulius (swulius@ih2000.net)

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