

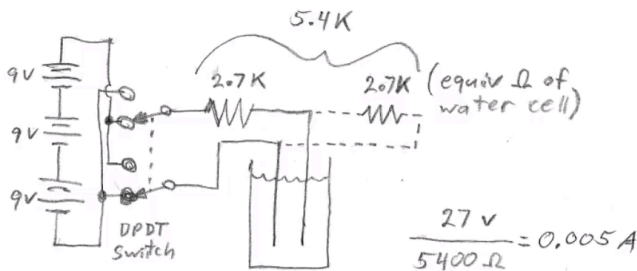
# Colloidal Silver

## What is It?:

Colloidal silver is a liquid that contains microscopic silver particles. Its use is thought to come from the old days when farmers would throw a silver coin into their wells, and the leaching silver would prevent the growth of bacteria in the well water. Throughout history, it has been used to treat illnesses, as an antibiotic, and as a disinfectant. It has been taken internally and used as a topical treatment. There are many conflicting reports about whether it is effective or not, and some studies suggest the (over) use of colloidal silver can have serious and permanent side-effects, so please do your own research and decide if this right for you and how you will use it. I am not a doctor, I am not making any medical recommendations or medical claims, and I am not suggesting whether or not you should use this, or suggesting how to use it. I am only showing you how to make it in case you're interested.

## What You Need:

- 1 Colloidal Silver Generator Set-Up
  - (3) 9v Batteries
  - (2) ~6"-12" Wires with Alligator Clips attached to ends
  - (1) Potentiometer
  - (1) Electric Terminal Block
  - (2) 1oz. .999 Pure Silver Bars or Rounds
  - (1) Voltage Meter



1 gal. Distilled Water

### 1-5 Drops of **Electrolite:**

Place 1Tbsp. of Baking Soda (Sodium Bicarbonate) in toaster oven @ 400\*-425°F for 1-1.5 hours to convert it to Sodium Carbonate. Mix 1 tsp. Of Sodium Carbonate with 2 oz. of Distilled Water. Pour into Eye Dropper Bottle.

### 4 Drops of **Reducing Agent:**

Mix 1oz. of (Karo) Light Corn Syrup with 1oz. of Distilled Water. Pour into Eye Dropper Bottle.

- 1 1L Beaker
- 1 Dark Glass Bottle
- 1 Paper Coffee Filter
- 1 Funnel

## **Instructions:**

1. Make sure all items are cleaned thoroughly (sterilized is preferred) and rinsed with distilled water prior to starting.
2. Pour 1L of Distilled Water into your 1L Beaker
3. Place Ionic Silver Generator Set-up on top of 1L Beaker
4. Adjust the Silver Rods so that the flats are facing each other, and so they are 1 3/4" apart. These will be your "electrodes" for the electro-chemical process.
5. Connect the 9v Batteries together in series (+ to -) by snapping them together. This will create a 27v battery pack.
6. Connect your Voltage Meter to the Generator Set-up.
7. Add 2 drops of Electrolite to the Distilled Water and mix. Add additional drops if necessary to get a stable 13.5v reading
8. Make sure the Silver Rods DO NOT TOUCH WHEN BATTERIES ARE CONNECTED. This will short circuit the battery pack causing sparks and possible injury. Turn the Potentiometer all the way down to 0.
9. Connect the wires to the open terminals of your Battery Pack (one + and one -).
10. Adjust the Potentiometer until you get a reading of 13.5v +/-10%. Monitor the process throughout the time you determine is appropriate for the approximate concentration you wish to achieve. Stir occasionally. Adjust the potentiometer to stay in the desired voltage range as necessary. Excessive voltage will cause an acceleration of the process, remove larger particles, and make the solution cloudy. Concentrations will be much higher and of an unknown concentration significantly above your desired end result.



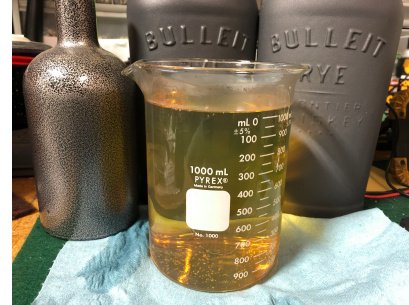
The electro-chemical reaction that produces Colloidal Silver has now begun. During this time, you will notice small bubbles coming off of the - electrode (left), and the surface of the + electrode (right) will turn black and accumulate a fuzz (dross) on it. This is normal and tells you that the process is working. The longer you leave the batteries connected, the higher the concentration of the Colloidal Silver will become. I do not yet know how to test the final result for concentration levels. If your solution gets too cloudy, start over and do not try to salvage the batch. If I can find an accurate way to do so, I will post a follow-up. Dissolved solids meters will NOT work.

### **ESTIMATED/CALCULATED Times To Concentration Levels @13.5v for 1L**

- 1 Hour @ 13.5v will give you an approximate/calculated 20ppm concentration
- 1 1/2 Hours @13.5v will give you an approximate/calculated 30ppm concentration
- 2 Hours @13.5v will give you an approximate/calculated 40ppm concentration

11. After the desired reaction time is up, FIRST remove the Wires from the Battery Pack.
12. Carefully remove the Silver Rods out of the solution, trying not to knock off any of the fuzz/dross that has accumulated on the surface, and set aside.
13. Next, add 4-Drops of the Reducing Agent and stir.

14. Place the 1L Beaker in a pot and fill pot around Beaker with water.
15. Heat the pot until the Ionic Silver Solution reaches 180°F (must reach at least 145°F). This will cause the Reducing Agent to bond with the dissolved silver to produce a colloid, making this true Colloidal Silver.
16. The Colloidal Silver should be clear and have a rich golden color. It should also have no taste. Ionic Silver has a heavy metallic taste, which should not be detectable after converting it to a colloid.
17. Transfer the Colloidal Silver solution into a dark glass bottle for storage by placing your Coffee Filter into your Funnel and pouring the contents of the Mason Jar through it. This will filter out any fuzz/dross that may have fallen off during the process, but will not remove the silver.
18. Seal and store your Colloidal Silver in a cool dark place, since it is photo sensitive and will turn dark if left out and exposed to light.



The silver rods that you use can be reused over and over again. I have seen that people have been using the same rods of silver over many years. The process only removes a microscopic amount silver.

Recommendations I have seen suggest that you do not want to remove the fuzz/dross from the silver, but to wrap it up and store it that way until the next time you use it. The next time you use it, take note of which side has the most fuzz/dross on it. Clean off the fuzz/dross, and hang them so that the sides that had the less fuzz/dross face each other. Alternating use of the rods between anode and electrode is supposed to keep the “electrodes” working more efficiently. You can do this by changing the positive and negative hook-ups on the Generator every few batches.

### **RESOURCES:**

Zero Labs Comprehensive Video:  
Far North Bushcraft And Survival:  
OOMAN's Generator and First Batch:

<https://youtu.be/Xur-oP3bmbc>  
<https://youtu.be/y12waU8xsW8>  
<https://youtu.be/E6DYvk9vA1M>