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# Nano Silver Generator



## **Silver Solution Generator Model 1:**

Ultra Low voltage DC type, 3 volt DC, 4.7 K ohm current limit resistor, 99.9% pure silver wires, #12 wire size.

Generator: \$169.00 plus \$20 shipping.

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# **Accessories:**

Extra silver electrode: (99.9% pure silver) \$20.00 - no shipping charge.

Add To Cart

This compact and efficient colloidal silver generator produces high quality silver solutions with nanometer particle sizes.

#### View pictures of the generator

### **Test Results 2**

Two samples were submitted to Colloidal Science Laboratory on 9-7-05.

Sample 1 was made 4-7-05.

Sample 2 was made 9-2-05.

Sample 1 total silver solution concentration is 13.5 ppm

Sample 2 total silver solution concentration is 19.0 ppm

Sample 1 size distribution: 87.3% of particles are 3.15 nanometers

Sample 2 size distribution: 96.5% of particles are 2.07 nanometers

Size Distribution Report in pdf format.

first report | second report

#### Comments from Frank Key:

Jim,

The pdf file is attached for the size report. The 19 ppm sample is a result of impurities in the water that provided the anions to allow a higher level of silver ions. The 13 ppm sample is representative of silver ion saturation in pure water.

Regards,

Frank

The "ionic silver" and "colloidal particle" ratio has not been determined yet. It is likely that the particle content is much less than 10%. It is interesting that the Hanna PWT (pure water tester) readings in uS (micro Siemens) are very close to the actual silver ppm readings.

# **Notes on Making Colloidal Silver**

There are many types of colloidal generators on the market. The most common device uses three 9-volt batteries in series to make a 27-volt DC source. This is hooked to two pure silver wires that are suspended in a glass of water. Some recommend using a salt solution to increase the conductivity of the water. With a salt solution it takes about 2 minutes to make a glass of colloidal silver. Others claim that the salt solution can cause problems and recommend to only use steam-distilled water. Without the salt it may take 45 to 60 minutes to make a glass of colloidal silver. The serious problem with this method is that you do not know when the process is done, and how many PPM of colloidal silver you made. Running a few extra minutes may burn the silver and create mud on the bottom and metallic silver floating on the top of the water. This may contain dangerously large particles of silver!

I experimented with inserting a current limiting resistor in series to reduce this problem, and that helped a lot, but still the color was much too brown indicating large particles. I progressively dropped the voltage to 12 volts, 6 volts, 4.5 volts and finally to 3 volts. The penalty you pay for lower voltage is that it takes longer. I am not in a hurry and would prefer to know that I am making the best possible colloidal silver. So at 3 volts it will take 24 hours to make 5 PPM colloidal silver that is perfectly clear (looks just like water, but tastes metallic). That indicates very small particles. This solution appears to be very stable and can be put in direct sunlight without any deterioration. For those who would like a stronger solution, you may cook for 2 days and get 10 to 15 PPM. After 3 days a maximum is reached and it seems that you cannot "over cook" using this method. What will happen is the saturated solution will try to plate out and accumulate on the negative wire. (You will see an accumulation of crystals and metallic silver on the negative wire.) It is best to strain this using a coffee filter. Initially the filter should be rinsed several times with distilled water. It can be used for many months before the filtering action slows down and needs to be replaced.

When done you should wipe the negative wire clean with a paper towel, and you may buff the silver electrode bright using the Scotch Bright pad if you choose. Don't scrub too hard because you will lose valuable silver from the wire.

(Note: 11-21-01) Cleaning with Vinegar and paper towel seems to be enough. Important: BEFORE brewing the next batch, clean both electrodes with a paper towel soaked with "pure distilled white" vinegar to remove oils and oxides and fingerprints. While still wet with the vinegar, insert the generator into the distilled water in the Mason jar.

The generator is designed to fit a 32 oz. Mason jar. Fill the jar to within ½ inch of the top with "steam distilled" water. Place the generator's two silver prongs into the jar. Make sure that the Teflon insulating sleeve on the negative wire is pushed all the way up and touching the plastic box. After one to three days remove the generator. Some of the accumulation on the negative wire will fall into the solution and must be filtered out. Place a #2 coffee filter on top of another 32 oz. Mason jar. Place 3 paper filters inside each other and hold them inside the coffee filter using two plastic clothesline pins. Carefully pour the solution into the filter. You should end up with a perfectly clear or very slightly yellow solution.

There have been reports of some strange problems with a few CS generator users. The most common one is that they wash their Mason jars with tap water and soap. The chlorine will produce some very interesting purple, red and brown colors in the CS. DO NOT WASH THE MASON JAR WITH DIRTY TAP WATER. Or if you do, rinse thoroughly with distilled water. You may have to scrub with a vinegar solution to get rid of the soap and then rinse several times with distilled water. The only time that the Mason jars need to be cleaned, is when there is a buildup of silver crystals on the bottom of the jar. In that case cover the bottom with vinegar and soak, and then scrub with a brush until all the silver deposit is gone. Rinse with tap water and then distilled water.

Another customer used the "better" "pure" brown coffee filter and ended up with a brown instead of clear CS. You may have to clean this filter material by running several gallons of tap water through it and then rinsing with distilled water.

For those who would like to test the CS that they are making, a Hanna PWT that sells for about \$60 will give a very good "indication" of the PPM of CS. Without a meter, just watching the silver crystal buildup on the negative pole will tell you that you have reached a saturated solution.

### **Maintenance:**

You can tell that the batteries need to be replaced when you don't see the normal accumulation on the negative electrode. Remove the top cover with a small Philips screwdriver and replace the two built in batteries with Duracell Alkaline Ultra Batteries, MX1500 LR6 1.5 Volt, M3 Technology. This type of battery has a built in battery tester. You can expect the batteries to last more than 5 years. The operating current of the generator is so low (less than 1 milli amp) that you can expect the battery life to be the same as the storage life as marked on the batteries.

The positive electrode (the one without the sleeve) will eventually wear out and will need to be replaced. The wire will get thinner and become brittle and eventually break. At this point I do not know how many gallons can be produced by one electrode. I would guess more than 10 gallons. I suggest that you buy one or more spare Silver Electrode wires. You will need a small jeweler's screwdriver to remove and install the new silver electrode.

Note (09-12-04) If the generator slows down or ceases to work and the batteries are good, the problem may be due to a buildup of corrosion on the negative electrode. Use the green Scotch Brite pad to scrub the electrodes until they are bright silver. Notes on making colloidal silver updates: 6-02-01, 7-27-01, 10-7-01, 04-01-03, 05-18-03, 09-12-04

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