

How to Make Ionic~Colloidal Silver



It is a simple process to make Ionic~Colloidal Silver with the SOTA Silver Pulser Models SP5 or higher.

Procedure

Simply immerse the silver wires in room temperature distilled water and turn the unit on. As a quick guide, let the unit run 1 hour for each cup of distilled water, stirring occasionally. For timing to make larger amounts, please see the table that follows these guidelines. Laboratory reports on surface applications indicate 3 to 5 parts per million (ppm) is strong enough to effectively stop several pathogens. For use on an ongoing basis it is suggested to limit the strength to less than 10 parts per million (ppm).

While there are videos on the web demonstrating how to quickly make Ionic~Colloidal Silver by heating the water, adding salt or simply using chlorinated tap water, this will not work with the current SOTA units because they use constant current. The constant current method ensures the amount of ionic~colloidal silver being produced stays constant regardless of heating or adding anything to the water.

Color

Ionic~Colloidal Silver should be either clear or a pale gold. If the color is darker it indicates a larger particle size and the presence of impurities. A darker colored solution can be used for household applications.

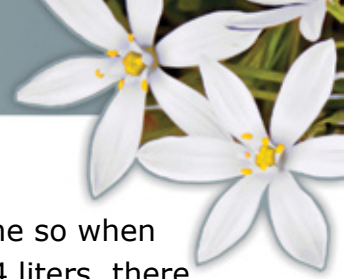
Variables

Distilled water is the variable. We tested four different brands of distilled water in trying to determine how long it would take to produce a 3 to 5 ppm solution. The table following shows the ppm at timed intervals. Before starting, we measured the ppm, or the amount of dissolved solids, with each brand of distilled water. Each brand had a different ppm. We've found the ppm of the same brand of distilled water may vary at different times of the year.

In addition, the testing instruments are a variable. For the greatest accuracy in measuring ppm, testing at a professional laboratory is necessary.

Oxide on Silver Wires

One of the silver wires will blacken more than the other. This is a build-up of Silver Oxides.



It is best to wipe the wires to remove oxides. The build-up is greater over time so when making larger quantities clean the wires regularly. When making 1 gallon or 4 liters, there will be a considerable amount of oxide build-up on the wires so they must be removed carefully to keep the sediment from settling into the solution.

PPM

The table following provides four trials with each quantity of water. About 80% of the 8-inch silver wires were immersed in the water.

We measured the ppm in Waters A and B, using a Hanna Instruments TDS1 (Total Dissolved Solids Tester). We measured the ppm in Waters C and D, using a Hanna Instruments PWT (Pure Water Tester). The PWT is considered more accurate.

Conclusions

Based on the testing results reported in the following table, our suggestion to run the unit for 1 hour for each cup of distilled water produces Ionic~Colloidal Silver within the effective yet safe range for longer term use.

Based on 1 hour per cup and subtracting the starting ppm of the distilled water:

The less accurate TDS1 tester indicated a ppm of 4 to 8 ppm.

The more accurate PWT tester indicated a ppm of 4.4 to 6.3 ppm.

As noted under “Variables” these results are approximate because of the nature of the testing devices and the variation in distilled waters.

Quantity	Time	Water A	Water B	Water C	Water D
Device to measure		TDS1	TDS1	PWT	PWT
ppm before starting		>1 ppm	>2 ppm	0.3 ppm	0.6 ppm
2 cups/500 ml	½ hour	2–3 ppm	3 ppm	1.0 ppm	1.3 ppm
	1 hour	3–5 ppm	5–6 ppm	3.1 ppm	3.4 ppm
	1½ hour	5 ppm	8 ppm	4.7 ppm	5.5 ppm
	2 hours	6–8 ppm	9 ppm	5.9 ppm	6.9 ppm
4 cups/1 liter	1 hour	3 ppm	3 ppm	0.7 ppm	0.8 ppm
	2 hours	4 ppm	5 ppm	2.2 ppm	1.9 ppm
	3 hours	5 ppm	7 ppm	4.3 ppm	3.5 ppm
	4 hours	5–6 ppm	10 ppm	5.2 ppm	5.0 ppm





Quantity	Time	Water A	Water B	Water C	Water D
Device to measure		TDS1	TDS1	PWT	PWT
ppm before starting		>1 ppm	>2 ppm	0.2 ppm	0.8 ppm
16 cups/1 gal/ 4 liters	6 hours	2 ppm	3 ppm	2.4 ppm	2.8 ppm
	7 hours	3 ppm	4 ppm	2.7 ppm	3.6 ppm
	10 hours	5 ppm	7 ppm	3.9 ppm	4.8 ppm
	12 hours	5 ppm	8 ppm	4.7 ppm	5.8 ppm

