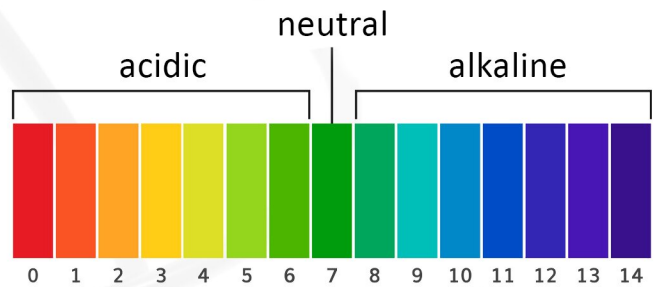
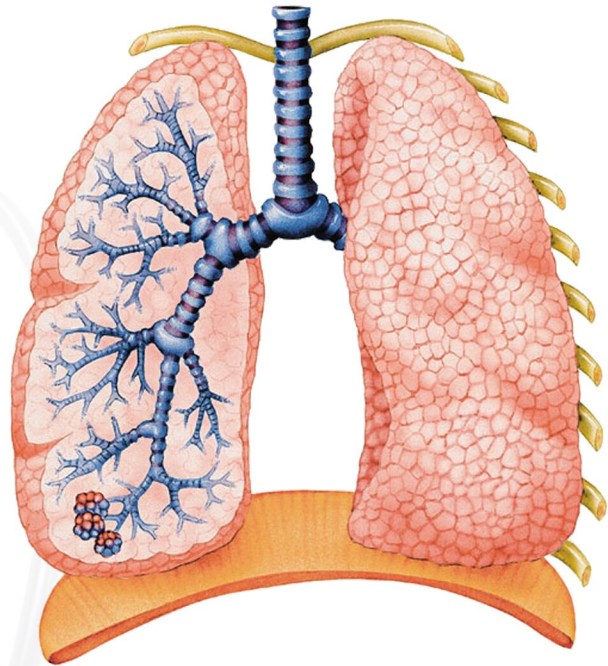


SilverLungs^{pH}

SYSTEM



User Manual

Welcome!

Please remember to always follow the preceding instructions closely to achieve perfect success with your new SilverLungs Generator. Now you can quickly produce laboratory-quality ionic and true colloidal silver solutions and finally break your dependence on silver solution manufacturers once and for all!

Distilled Water Only!

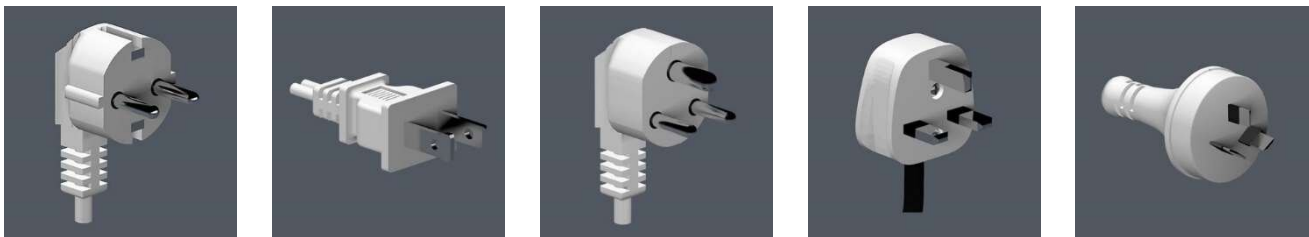
It is highly recommended to refrain from using well water, spring water, or water labeled simply as filtered water. Additionally, avoid using water from gravity-type filtration systems, as they are designed solely for drinking purposes and will not be pure enough for silver solution production. Only distilled water, which consists solely of pure water, should be used. If you intend to use reverse osmosis water, it is crucial to ensure that it measures no higher than 1 PPM on a water test meter. Use only a trusted brand of distilled water and again, always verify its measurement to be no higher than 1 PPM on a water test meter. Any measurement exceeding 1 PPM will create a cloudy solution and is not recommended for consumption or administration in any way.

Using water distillers | When utilizing a water distiller, it is imperative to eliminate any charcoal or carbon post filters. These filters may release small traces of charcoal and carbon into the distilled water, which could potentially interact with the ionic silver during the production process. Most home water distillers do not attain the necessary water purity level of 1 PPM. Therefore, it is essential to test the water purity before using self-produced distilled water to ensure the required level of purity can be achieved. If the initial distillation process yields a reading higher than 1 PPM, you can re-distill the same water until the desired level of purity is ultimately attained.

Never add salt or saline to reduce production time! | It is crucial to avoid adding any substances such as salt or saline to the distilled water. This precaution is vital to preserve the purity and safety of the silver solutions produced, as well as to prevent the formation of undesirable silver compounds that should not be consumed or administered. The only exception to this rule is when using the optional "Accelerating Agent" available in our online store. This specially formulated additive is designed to prevent the formation of foreign silver compounds during production while still allowing for a 50 percent reduction in production time, ensuring the highest quality of the final product.

The Silver Generator (World Compatible)

The provided power adapter is an automatic and fully universal adapter designed to be compatible with all power standards worldwide. However, it is important to be aware that operating the silver generator in a kitchen where other high-current electrical devices are connected to the same circuit may lead to lower-than-expected silver concentrations. Appliances like refrigerators and electric ovens can cause significant voltage drops across the shared circuit, which can impact the performance of the silver generator. While we understand that kitchens are often convenient locations for setup, it is advisable to consider relocating the silver generator if premature shut-offs occur or if the desired silver concentrations are not achieved.



Water Test Meter

The SilverLungs water test meter comes pre-calibrated to ensure accurate measurement of water purity and provides precise readings of the dissolved ionic silver content after production. The calibration of the water meter is hard-locked and does not require recalibration, even if the batteries are replaced.

Please do not attempt to recalibrate the meter as it has already been calibrated with the appropriate correction factor specifically designed for measuring dissolved silver. It is important to understand that silver has a very specific correction factor required for proper measurement. If the meter is recalibrated to typical industry standards, it will result in a -25% reduction in screen readings, inaccurately reporting lower silver measurements than actually present.

Operating

The SilverLungs water test meter comes with 3 buttons on the main face and an LCD screen.



Not Waterproof!

Remember to exercise caution and prevent any accidental drops of the water test meter into the flask of water, as the meter is not waterproof. It is crucial to note that we cannot offer a warranty for any water damage that may occur to the test meter.

Measuring Silver Concentration (Time Sensitive)

The water test meter is specifically designed to measure silver ions in solution, known as ionic silver. It is important to note that it cannot measure or detect any other forms of silver, such as silver hydroxide, which naturally forms during and after production. As a result, the most accurate measurement of ionic silver can only be obtained shortly after producing a new silver solution. Over time, the reading on the water test meter will gradually decrease by up to 33% due to the natural formation of silver hydroxide. This occurs when the dissolved ionic silver reacts with the high pH of the silver solution. It is crucial to remember that silver hydroxide is a form of silver that cannot be measured by the water test meter, thus concealing a portion of the previously measurable ionic silver. However, please be assured that no actual silver has been lost during this conversion process. Only a portion of the previously measurable ionic silver is now undetectable, resulting in a lower reading on the water test meter. Therefore, always keep in mind that the original silver concentration is still present, but only a portion of it will be in a form that cannot be measured using the water test meter.

Storage Containers (Cleaning)

It is crucial to ensure that your storage container is effectively rinsed with distilled water. Ionic silver possesses reactivity and can form undesirable silver compounds when combined with other elements. To prevent such reactions, it is recommended to use only distilled water, which is free from chemically reactive elements, for pre-cleaning your containers. Avoid using spring water, reverse osmosis water, gravity filtered water, or atmospheric generated water for cleaning purposes. These types of water contain impurities that will contaminate a new silver solution when added to the container.

Never use chemicals to clean the glassware!

Once you have cleaned your storage container with distilled water, it is crucial to conduct an additional wipe-down of the internal components of the glass applicators using distilled water and a fresh, clean paper towel or napkin. It is important to remember that each glass applicator contains plastic or glass tubes inside that also need to be wiped down with distilled water. To maintain the purity of the silver solution, it is advisable to avoid touching any of the internal tubes or plastic with your fingers, as this can introduce contaminants onto these surfaces. Contaminants in the container have the potential to degrade and compromise the quality of the silver solution over time once it is added. Therefore, taking these precautions will help ensure the integrity and quality of your silver solution.

Glassware (Clear and Colored)

If you have selected colored storage bottles and applicators, they offer UV protection to safeguard the silver content from sunlight. Direct sunlight, with its UV rays, can gradually diminish the reactive ions, causing them to transform into silver atoms and particles instead of maintaining their ionic form. In the case of clear containers, which allows monitoring of the important yellow color of colloidal silver solutions, it is important to be aware that these solutions are also sensitive to UV rays. To ensure their stability, it is advisable to store yellow solutions in a dark place, such as a cabinet, to prevent exposure to sunlight. Always remember to monitor the yellow color before administering yellow colloidal silver solutions. Additionally, colorless storage containers and applicators are recommended when producing yellow colloidal silver solutions, as it is necessary to monitor their crucial color, which is not possible with colored containers.

Never consume discolored or cloudy solutions, as this indicates contamination.

Proper use of the glassware | Never drink directly from a storage bottle. Saliva and salts from the mouth can degrade the ionic silver content or compromise the stability of a yellow colloidal silver solution. Additionally, when using the eye/ear dropper, it is crucial to prevent the glass tube from coming into contact with the eyes or ears. This helps to avoid introducing contamination back into the solution when re-inserting the glass tube into the bottle.

Signs of contamination | Should an ionic silver solution become cloudy or if a yellow colloidal silver solution experiences a change in color or becomes clear, it signifies contamination, and the solution should be discarded. To uphold the integrity of the production process, it is crucial to maintain a clean working environment and exercise proper handling during setup and production.



Silver Concentration

The distinction between the two power levels of the silver generator lies in the resulting silver concentration they produce. We have determined that 10 PPM is suitable for lung vaporizing, while 20 PPM can also be utilized. It is important to remember that a 20 PPM solution simply has double the concentration of a 10 PPM solution. For instance, 1/2 teaspoon of a 20 PPM solution is equivalent to 1 full teaspoon of a 10 PPM solution. There is no incorrect setting to choose from, as it depends on the desired silver concentration and the difference in production time between the two settings on the generator. However, if you are following the "colloidal silver protocol" outlined on Page 11, the 20 PPM setting is necessary. This is because the low pH of the 10 PPM setting is not sufficiently high enough to effectively work with the "Reducing Agent" during colloidal silver production.

Ionic and Colloidal (Applications)

Based on our experience, we recommend using ionic silver solutions for the eyes, ears, and topical applications. They can also be used effectively for targeting the lungs. However, when it comes to creating colloidal solutions, we have found them to be more suitable for oral and nasal administration. This is because silver particles do not form silver chloride when ingested or delivered nasally. It is worth noting that silver chloride is a weaker form of silver. True colloidal silver can also be utilized to target the lungs and for direct bloodstream delivery. **50/50 blended solutions are considered the most versatile type to administer, especially when unsure which to choose. These solutions contain both silver ions and silver particles, providing a comprehensive and balanced approach.**

Ionic

eyes, ears, lungs, topically

Colloidal

oral, nasal, lungs, rectally, vaginally

Dosage and Suggested Use

In accordance with United States Federal laws governing "dietary supplements," we are only allowed to offer general suggestions regarding the administration of silver solutions.

Topically | Dosage is not a concern for the eyes, ears and when dressing wounds, cuts, scrapes, abrasions, etc.

Orally | For adults, we suggest a daily oral "maintenance dose" of 1 tablespoon of a 20 PPM solution. However, children or infants should take 1 teaspoon of a 20 PPM solution. When consuming orally, it is crucial to adhere to the colloidal protocol provided on Page 11. It is also recommended to take the solution on an empty stomach. Introducing silver into the complex and constantly changing environment of the stomach, with its common foods and unpredictable chemistry, can rapidly degrade the quality of the silver solution. Therefore, consuming the solution on an empty stomach helps ensure its effectiveness and stability.

Vaporizing | For an uncomplicated maintenance regimen, we recommend inhaling the silver solution through 24-48 inhalations per session, with sessions scheduled every 1-3 days. Vaporizing the solution is the most effective method for delivering silver into the bloodstream, as it bypasses the harsh environment of the stomach. Direct inhalation into the lungs allows for targeted delivery that cannot be matched by oral administration, even under optimal conditions. Therefore, to achieve systemic delivery into the bloodstream and effectively target the respiratory system, we highly recommend the use of a vaporizer. This method ensures efficient and precise delivery of the silver solution.

Nasal | To specifically target the upper respiratory system, we suggest utilizing a nasal sprayer and administering 2-4 sprays per nostril every 1-3 days. Another option is nasal delivery through a vaporizer, where both 10 PPM and 20 PPM concentrations are suitable. This approach ensures effective delivery and allows for the desired benefits in targeting respiratory concerns.



Step 1: Place Generator

Ensure that the generator is situated in a stable and undisturbed area to prevent accidental movement. During production, the silver electrodes will accumulate a layer of silver hydroxide. Any sudden bump or movement may cause the silver hydroxide to shake off, affecting its suitability for consumption or requiring additional time for it to settle after production.

Note: Avoid placing the generator in cold rooms such as unfinished basements, work sheds, or garages. If the water temperature drops below 70°F, the unit will not automatically stop, resulting in a messy solution.



Step 2: Power OFF Generator

Find the slide switch located at the rear of the generator and switch it to the OFF position. Connect the 48V DC power adapter to both the generator and a wall power outlet. It is crucial to use the correct voltage power adapter to ensure the proper function and reliability of the generator.

Once the generator is connected to the power outlet, a solid BLUE light will be visible, indicating that the generator is in an idle state and ready for operation once the desired power level is selected.



Step 3: Clean Flask

Fill the flask with a small quantity of distilled water and use the cleaning brush to thoroughly clean the inside. Once cleaned, empty and dispose of the water.

Next, add another small amount of distilled water to the flask and give it a final swirling rinse to remove any remaining impurities. Finally, discard the water.

Remember: Always ensure clean hands before preparing a new silver solution to prevent any chances for a potential contamination to be introduced into the production flask.



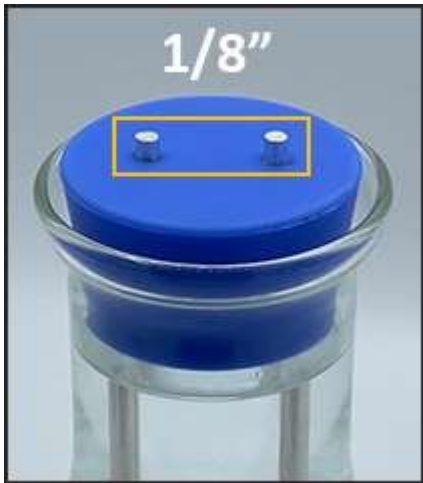
Step 4: Polish Electrodes

Gently polish the electrodes using the provided 100% copper scouring pad under running tap water. Use water during the polishing process, ensuring to avoid any dry polishing.

100% copper pads only! Never use any other type of scrubber to polish the silver electrodes with.

Once the electrodes have a shiny finish, wipe them down with distilled water and a fresh paper towel or napkin.

Lastly, remember to polish the "tips" of the electrodes as they are often overlooked during the polishing process.



Step 5: Prepare Stopper and Electrodes

Ensure that the electrodes are straight, polished, and clean. Carefully insert the rough ends of each electrode into the bottom of the stopper, making sure that no more than 1/8-inch protrudes. Remember, the rounded/smooth ends of the electrodes should be submerged in the water, not the rough-shaped ends where the clips attach.

Double-check the alignment of the electrodes to ensure they are parallel to each other. If they are not aligned, a slight twist on either electrode should correct the alignment. Before final insertion, perform one final wipe-down of the polished electrodes before inserting them into the distilled water.



Step 6: Test Water Purity

To ensure a proper solution, it is crucial to use absolutely pure water. Merely assuming water is pure without testing is not advisable. Even if the water is labeled as distilled or you have distilled it yourself, it does not guarantee its purity for production. Using a water test meter, measure the water's purity, ensuring it does not exceed any number higher than 1 PPM. This is vital.

Note: If you observe a cloudy solution forming during production, it strongly indicates contamination or the use of water that did not meet the criteria of truly pure.



Step 7: Add Water

Fill the flask with pre-tested distilled water, leaving approximately 1-inch of space from the top. Insert the stopper and electrodes, making sure there is approximately 1/8 inch of air gap from the bottom of the stopper to the top of the water level.

Next, temporarily remove the stopper and electrodes from the flask and place them on a clean surface, such as a new paper towel or napkin.

Important: Remember that maintaining the proper water level is crucial for the generator's function. Using a larger air gap will disable the automatic shutoff feature and result in a cloudy and unusable solution.



Step 8: Position Magnetic Stirring Bar

With the generator powered OFF, place the production flask on top of the generator. Ensure the stirring bar is cleaned with distilled water and carefully deposit it into the flask, avoiding touching it with your fingertips. You can use a new paper towel or napkin to handle the stirring bar before dropping it into the flask.

Once the cleaned stirring bar is in the flask, ensure it is magnetically centered at the bottom. If it is off to the side, gently move the flask around to help the stirring bar find its magnetic center.



Step 9: Insert Stopper and Electrodes

Gently place the stopper and electrodes into the flask, applying slight pressure to create a gentle seal. Avoid pressing too firmly, as this may make it challenging to remove later and shake off any loosely attached silver accumulation on the electrodes into the solution. If excess silver or particulate is released during extraction, allow it to settle at the bottom before dispensing the new silver solution into your final storage container.

Tip: You can optionally use the stopper (upside down) allowing for a perfect, disruption-free extraction when complete. Reversing the stopper allows it to gently lay on top of the flask rather than it becoming pressed too hard into the opening. This will not compromise production in any way.



Step 10: Attach Electrode Clamps

Attach the electrical leads to the silver electrodes in any order.

As shown in the image to the left, make sure that only 1/8-inch of silver is exposed from the stopper, allowing as much silver as possible to be submerged in the water.

Remember: It is vital to maintain a 1/8-inch air gap in the flask and no more than 1/8-inch of protruding silver. Using a larger air gap or allowing excessive silver to extend from the stopper can disable the automatic shut-off feature and result in a messy and undesirable solution.



Step 11: Select a Power Level and Begin!

The generator provides two power levels for you to choose from. The HIGH setting produces solutions in the 20 PPM range, while the LOW setting yields solutions in the 10 PPM range. The time required for solution production depends on the initial water purity. Without the optional Accelerating Agent, the LOW setting will produce a 10 PPM solution in approximately 100 minutes, while the HIGH setting will generate a 20 PPM solution in about 150 minutes.

Once you have selected your desired power level, you will see the magnetic stirring bar starting to spin in place, accompanied by a change in the front panel light, either turning GREEN or RED, depending on the chosen power level.

As the concentration of the solution reaches the pre-selected 10 or 20 PPM level, the unit will automatically shut off. At this point, you will notice the magnetic stirring bar stop, and the front panel light will change to a flashing BLUE light, indicating that the process has completed. Now, you can proceed to the final steps of verifying the quality and concentration of the silver produced.

Remember: The generator does not operate based on a timer; instead, it is equipped with intelligent circuitry that measures the actual silver content and shuts off when 10 or 20 PPM of silver concentration is reached.

When removing the stopper, avoid pulling it straight out. Instead, gently work the stopper in a circular motion while slowly easing it out. You can optionally use the stopper (upside down) allowing for a perfect, disruption-free extraction when complete.



Step 12: Analyze and Measure

Analyze: If you have purchased the laser pointer with your kit, use it to direct the laser beam through the flask and observe for the presence of large bright spots in the solution. It is normal to have a few scattered bright spots, which may be dust or lint. This step is simply to ensure that only a few scattered spots are visible.

In a 10 PPM solution, the laser may appear very faint or not at all, while a 20 PPM solution will show a more noticeable laser due to a higher concentration of silver oxide.

To verify the silver concentration, power on the water test meter (if included in your kit) and insert it into the solution until a reading appears. Make sure to wipe the water test meter clean to prevent any potential contamination from affecting the solution.

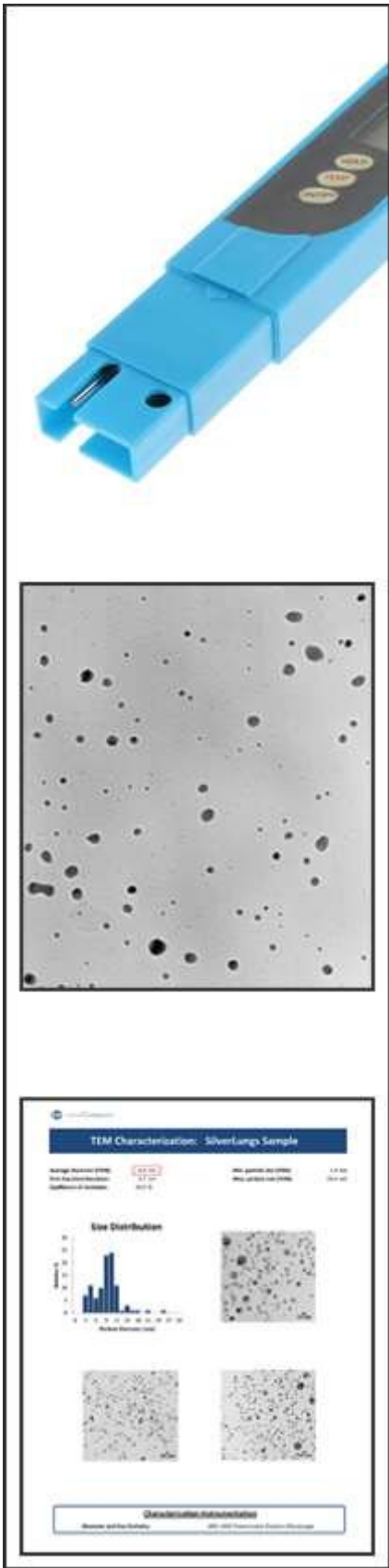
Measure: For a solution produced using the 10 PPM setting, the expected measurement should be right at 10 PPM.

For a solution produced using the 20 PPM setting, the expected measurement should be right at 20 PPM.

Finishing Up: If your solution shows only a few scattered bright spots (if any) when analyzed with the laser, and the silver concentration has been verified using the water test meter, congratulations! You have successfully completed the production of a new ionic silver solution.

Suggestion: After taking the final silver measurement, it is recommended not to reinsert the stopper and electrodes into the new solution. Instead, dispense the silver solution into pre-cleaned storage bottles (Page 3) or proceed to the colloidal silver protocol (Page 11) if you wish to convert your new ionic silver solution into a colloidal silver solution.

Tip: When your production session is complete, reinsert the stopper and electrodes into the flask. It is a good practice to leave the stirring bar in the flask as well to prevent it from being lost as it is very small.



Understanding PPM Measurements

It is important to understand that when measuring your silver solutions, only silver ions can be detected using a water test meter.

If you have converted your ionic silver solution to a colloidal silver solution (Page 11), you should expect a significant decrease in the silver PPM measurement on the water test meter. This is because colloidal silver is a non-measurable form of silver, so the initial higher reading will decrease accordingly.

When using the LOW power level, the immediate measurement should be right at 10 PPM after completing that stage.

At the end of the HIGH power level, the measurement should be right at 20 PPM

PPM Drop Over Time: When producing a new silver solution without opting for the colloidal protocol (Page 11), please note that there will be a gradual decrease in the measurable PPM over the course of one week if you choose to re-test the concentration. This drop occurs as the ionic silver content gradually reacts with free hydroxyl ions in the water, converting to non-measurable silver hydroxide. No actual silver is lost during this process; rather, a percentage of the silver ions convert into this non-measurable form of silver hydroxide. This explains why the PPM measurement slowly decreases over time when using a water test meter.

Time-Sensitive: The most accurate measurement of the total silver concentration can only be obtained immediately at the end of a new production, rather than measuring many hours later.

Particle Sizes Produced: When following the true colloidal protocol (Page 11), the average particle sizes produced are around 8-9 nanometers in diameter. This has been verified through TEM (Transmission Electron Microscopy) analysis.

Shelf Life: Assuming that your self-produced silver solutions are stored in a dark environment, protected from prolonged exposure to UV rays from the sun, and stored in a contamination-free container, your silver solutions should remain suspended and ready for use for at least 6 months.

The Colloidal and 50/50 (Protocol)

Described | True colloidal silver is characterized by a silver solution that predominantly consists of silver particles rather than silver ions.

Note: Upon transitioning from an ionic solution to a colloidal solution, you will notice a substantial decrease in the reading on the water test meter. This reduction can reach up to -75% over time. This change in reading occurs as a direct outcome of the conversion process, where the silver solution shifts from being primarily ionic to predominantly composed of silver particles. This decrease evidences the successful transformation into a colloidal silver solution, wherein measurable ionic silver has been converted into a non-measurable form.

Step by Step Instructions

1 - To guarantee the appropriate conversion of silver ions into silver particles, it is essential to create a new solution exclusively using the HIGH setting. The LOW setting does not facilitate proper conversion due to the lower pH level it generates. By opting for the HIGH setting, you can ensure proper conditions for the conversion process, resulting in the desired formation of silver particles.

2 - Next, detach both clips from the silver electrodes and gently remove the stopper along with the electrodes, leaving the stirring bar at the bottom of the flask. **The stopper and electrodes are no longer necessary at this point and can be put aside.**

3 - While keeping the flask positioned on top of the generator, adjust the generator to the OFF position and then switch back to either the LOW or HIGH setting. This will reactivate the stirring mechanism, facilitating the thorough mixing of the "Reducing Agent" in the subsequent steps.

4a (colloidal) - Slowly add **6 drops** of the "Reducing Agent" into the solution that is now stirring from Step 3. This step initiates the conversion process for a slowly forming colloidal silver solution.

4b (50/50) - To create a 50/50 blended solution of colloidal and ionic silver, simply add **1 drop** of the "Reducing Agent" to the solution that is now stirring from Step 3.

After adding the "Reducing Agent," the solution will gradually change from colorless to a shade of yellow, depending on the amount of drops used. After a few minutes, stop the generator to finish the stirring process. Conversion will take 4-8 hours for both 50/50 blended and full colloidal solutions.

pH Levels | As the ionic solution undergoes conversion into a 50/50 or full colloidal solution, the initial pH of 10 in the original ionic solution will gradually decrease to a pH range of 7-8 within 12-24 hours if tested. Only the original ionic silver solutions created without the addition of the "Reducing Agent" will remain highly alkaline. This pH shift is a natural consequence of the conversion process and indicates the successful conversion into a true colloidal silver solution.

The importance of yellow | Always verify the original yellow color of the solution before consumption. Contamination in the storage bottle can lead to changes in the solution's color over time, including shades of red, green, blue, pink, or gray. Eventually, the solution may even become colorless. **If a yellow colloidal solution loses its original color or an ionic solution becomes cloudy, it indicates degradation and should be discarded.** To monitor the important color and clarity of a solution, always use clear containers for storage. This allows for easy observation.

Never freeze | Take care not to leave colloidal silver solutions in your vehicle or expose them to freezing temperatures. Freezing can cause the solution to lose its color and become unusable, as the silver particles may aggregate and settle at the bottom.

Clear storage containers | To effectively monitor the color and clarity of your silver solutions, always use clear storage containers. Colored containers make it difficult to assess the silver solution's state and quality due to limited visibility.

Automatic Shut-Off (Troubleshooting)

Provided below is a troubleshooting checklist to address a failed automatic shut-off of the generator during silver solution production. If the run-time exceeds 3 hours or the solution appears cloudy, follow these steps to identify anything overlooked in your setup. **It is important to allow the generator up to 3 hours to shut off before assuming a failed shut-off**, as production times can vary based on the initial water purity, particularly on the HIGH, 20 PPM setting.

Reminder: The generator functions based on intelligent circuitry rather than a timer. It employs this technology to measure the actively dissolving silver during production, enabling the generator to determine when the desired PPM concentration has been achieved. Once the target PPM has been reached, the generator will automatically stop production. This feature ensures precise and efficient silver solution production without the need for manual intervention.

Troubleshooting Steps

1 - Water too cold | To ensure the proper shut-off functionality of the generator, it is crucial to maintain the water temperature above 70 degrees Fahrenheit. Avoid placing the generator outdoors during cold periods of the year. Areas such as unheated garages, basements, or work sheds may not provide the necessary temperatures required for optimal operation. It is important to consider the ambient temperature and choose a suitable location to support the generator's functionality.

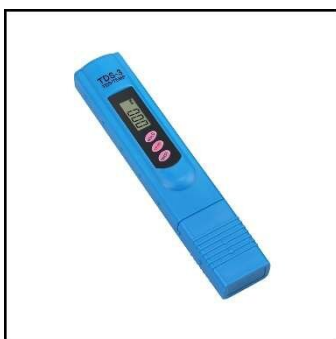
2 - Too little water in the flask | It is essential to maintain an air gap between the top of the water line and the bottom of the stopper that does not exceed 1/8 of an inch as shown below. If the air gap is too large, it can cause a failed automatic shut-off or result in an extended run-time. This can lead to the production of a cloudy solution, which should be discarded.

3 - Bent electrodes | Both silver electrodes must always be straight as well as parallel to each other. If one or both of the electrodes become bent, this will either result in a premature shut-off, leading to lower concentrations of silver being produced or a complete failure to shut-off. As a quick check, ensure that the electrodes are straight enough to roll freely on a flat surface. If you find that your electrodes have become bent beyond repair, please contact us for further assistance and guidance:

info@silverlungs.com | 1-888-444-1620

4 - Wasted silver | If an excessive amount of silver protrudes from the top of the stopper where the clips attach, it can lead to a similar issue as insufficient water in the flask. This can hinder the generator from reaching the automatic shut-off. To ensure proper operation, it is crucial to check that no more than 1/8 inch of silver is protruding from the top of the stopper as shown below.

5 - Untested water | If the water used for production has not been tested and verified to have a purity of 1 PPM or less, impurities present in the water can bind with the silver ions during the production process. This can result in a prolonged shut-off period and is often indicated by the formation of a cloudy solution. **Testing the water purity is not an optional step.** It is vital to ensure that the initial water purity does not exceed 1 PPM when tested.



Silver Solutions (Notes & Precautions)

- Never refrigerate or allow a silver solution to freeze!
- Never drink from a silver solution bottle as this will contaminate the solution.
- Avoid extended exposure to direct sunlight and UV rays.
- Drink on an empty stomach when consuming orally.
- Avoid placing paper towels, cotton balls, or anything else on the opening of a silver solution for application. Instead, pour the solution onto your desired surfaces or applicators directly. This ensures proper and controlled application without the risk of contamination.

Ionic

Prior to administering the ionic silver solution, it is essential to carefully examine it for any indications of cloudiness. Contamination can lead to a cloudy appearance in an ionic silver solution. Therefore, it is crucial to remain observant and assess the clarity of the solution before using it.

Colloidal

Always verify the yellow color of the colloidal or 50/50 blended solution before using it. Consumption of a color-shifted or cloudy silver solution should be avoided, as it indicates contamination and instability. If a yellow colloidal silver solution turns other colors, it signifies particle growth, rendering it unsuitable for administration.

50/50 Blended

Always check for the light yellow color of the 50/50 blended solution before using it. Refrain from consuming a color-shifted or cloudy colloidal silver solution, as it indicates contamination and instability of the colloidal portion. If a yellow silver solution turns other colors, it signifies particle growth, rendering it unsuitable for administration.

Why is true colloidal silver yellow?

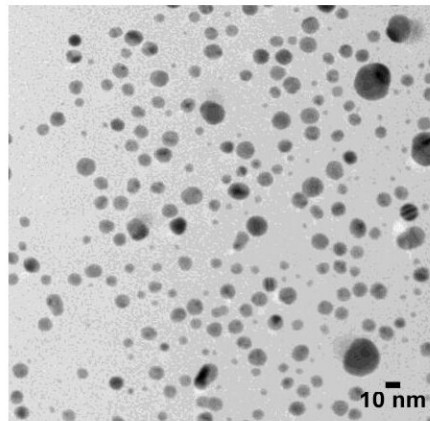
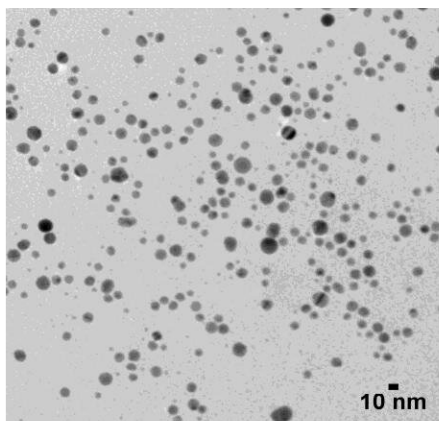
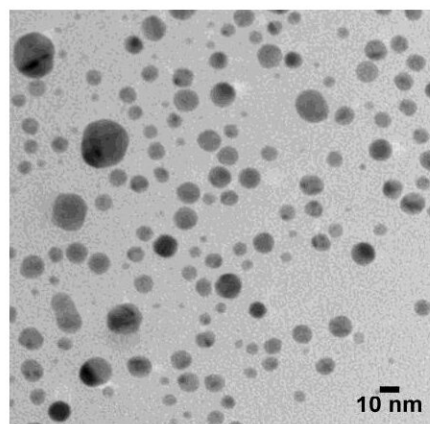
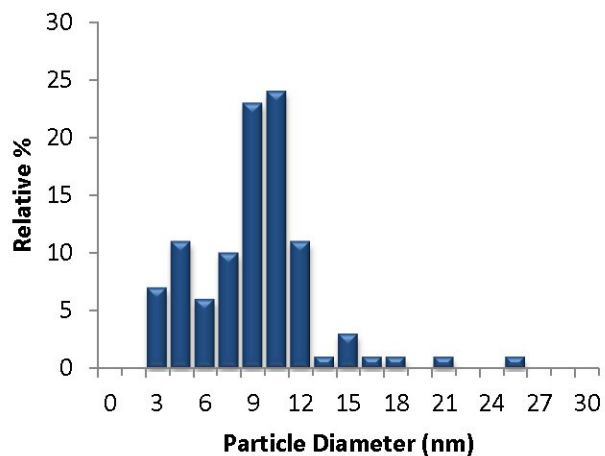
The yellow color observed in a colloidal silver solution is a result of the selective absorption of the purple color spectrum by silver nanoparticles. This phenomenon, known as "plasmon absorption resonance," is a natural occurrence in the realm of particle physics of silver nanoparticles in water. The silver nanoparticles reflect back all other colors, leaving yellow as the predominant color in the absence of purple. Claims stating that colloidal silver solutions must always be colorless are often made by those who are unable to produce an authentic colloidal product according to proper definition. It is important to note that colorless silver solutions are more accurately defined as ionic silver solutions, yet are rarely labeled as such.



TEM: Particle Size Analysis

Diameter (TEM):	8.4 nm	Min. particle size (TEM):	1.9 nm
First Standard Deviation:	3.7 nm	Max. particle size (TEM):	25.4 nm
Coefficient of Variation:	44.5 %		

Size Distribution



Characterization Instrumentation

Diameter and Size Statistics:

JEOL 1010 Transmission Electron Microscope

SilverLungs (Common Questions)

Why silver? | With a rich history of over a century of extensive research, numerous laboratory tests have consistently showcased the remarkable efficacy of silver in eliminating disease-causing pathogens, viruses, and bacteria within minutes of contact. Silver possesses potent properties that make it anti-fungal, anti-germicidal, anti-bacterial, and anti-viral. Even today, silver-infused bandages are widely used in hospital burn wards, effectively preventing the formation of scar tissue. Ionic silver also plays a critical role in the regeneration of skin tissue, enabling damaged cells to transform into new, healthy cells. By facilitating this cellular transformation process, silver aids in the optimal healing of wounds by allowing the cells to develop into the necessary types for the restoration process.

What is colloidal silver? | Colloidal silver is often described as a suspension of extremely small silver particles and silver ions dispersed evenly in a water-based solution. However, a more precise definition clarifies that colloidal silver primarily consists of silver particles, while ionic silver refers to a solution primarily composed of silver ions. When discussing the size of these particles and ions, the unit of measurement used is called a "nanometer," which gives rise to the term "nanosilver." It is important to understand that "nano" solely refers to size and does not indicate a different type of silver. The term "nanosilver" has gained popularity in recent years as a marketing term, misleadingly suggesting a completely new form of silver solution. To comprehend the minuscule scale of these particles and ions, imagine magnifying the diameter (not the length) of a single human hair to represent a distance of one mile. Within that vast stretch, these tiny silver species would appear as green peas.

What is nanosilver? | Amidst the current wave of excitement surrounding "nanosilver," it might come as a surprise to discover that it is simply the latest marketing term used to describe colloidal or ionic silver. While the term may generate intrigue and curiosity, it is important to recognize that nanosilver is essentially synonymous with colloidal silver. The recent hype surrounding nanosilver has created a perception of novelty, but in reality, it is just another way of referring to the tried-and-true colloidal silver that has been utilized for its diverse properties over the years.

What is PPM? | The term "parts per million" (PPM) serves as a measurement used to express highly diluted concentrations of one substance within another. When discussing silver PPM, we are primarily referring to the quantity of silver present rather than its type or particle size. It is common for individuals to misconstrue the difference between 10 PPM and 20 PPM, assuming it relates to the type or size of silver particles. However, the distinction lies solely in the total amount of silver within the solution. To better understand this concept, let us consider an analogy using aspirin: just as a 500 mg aspirin does not differ from a 1000 mg aspirin in terms of compound type, but rather varies in the quantity of the same compound, similarly, a 20 PPM silver solution can be likened to ingesting one ounce, while a 10 PPM silver solution can be compared to consuming two ounces.

What kind of silver is produced?

- **Silver Ions** | An individual silver atom that has lost one of its negatively charged electrons is referred to as a silver ion. When an electron is removed from an electrically neutral silver atom, it leads to an increment in positive charge within the atom.
- **Silver Atoms** | The smallest complete unit of silver is known as a silver atom. Silver atoms tend to join together with other silver atoms, resulting in the formation of silver particles through a process called "agglomeration." When these silver particles are dispersed within a liquid medium, they are referred to as colloids.
- **Silver Particles (Colloids)** | Silver particles are created when multiple silver atoms bond together in a metallic manner. These particles, commonly referred to as colloids, can exhibit a range of sizes, spanning from ultra-small to relatively large. However, it is generally preferred to have smaller particles as they tend to possess superior quality and function.
- **Silver Oxide and Hydroxide Particles** | During the electrolysis process, the formation of silver compounds such as silver oxide and silver hydroxide occurs. These compounds naturally arise as byproducts in a high pH silver solution during and after production. When consumed, these silver

compounds undergo dissociation, separating the silver from the oxygen and hydroxide components. This liberation process releases the silver in its free form once again. Consequently, a silver solution containing silver oxide and silver hydroxide is collectively considered to be an ionic silver solution, as the ionic silver will eventually be set free when administered.

Is true colloidal silver clear or yellow? | True colloidal silver solutions indeed exhibit a yellow coloration. This hue is a result of the selective absorption of the purple color spectrum by the silver nanoparticles present in the solution. Consequently, the particles reflect back all other colors, giving rise to the manifestation of yellow in the absence of purple. This color phenomenon, known as "plasmon absorption resonance," is governed by the principles of physics and is a well-established characteristic of silver nanoparticles in a solution. Common claims suggesting colloidal silver solutions should always be colorless often arise from those who lack the ability to produce an authentic colloidal product.

What truly happened with "The Blue Man?" | During his personal silver solution production, Paul Karason made an error by adding common table salt (sodium chloride) to his distilled water in an attempt to expedite the process. However, salt should never be introduced into the "electrolysis" process when creating a pure and safe silver solution. Regrettably, the addition of salt resulted in the formation of a distinct silver compound known as silver chloride. This compound has been linked to a skin discoloration condition called "Argyria." It is crucial to highlight that silver chloride is not synonymous with pure ionic or colloidal silver. It is worth noting that properly produced ionic or colloidal silver solutions have never been associated with any known instances of Argyria.

Does SilverLungs use constant current? | One aspect of certain colloidal silver generators that often leads to misunderstanding is the term "constant-current." This term is quite misleading as it suggests that the current flowing through the water remains consistent throughout the entire electrolysis process, which is only true for approximately 15% of the total time involved. To provide a more accurate description, the term "current limiting" should be used, as it reflects the true functionality of this feature. The SilverLungs Generator is thoughtfully designed to produce solutions at a faster rate compared to constant current generators, while also ensuring that an electrically-critical point is never reached. This is crucial because such a critical point could potentially promote the creation of large particles through secondary electro-chemical processes. To prevent this, the SilverLungs Generator incorporates various features, including the industry's largest silver electrodes, a magnetic stirring system, dynamic polarity reversal technology, and an automatic shut-off function. Together, these features work harmoniously to maintain the current flow below a threshold that could potentially lead to the formation of large and undesirable silver particulates.

What is the shelf-life of a silver solution? | The shelf-life of a silver solution largely depends on the storage conditions and the container used. Assuming that the silver solutions are stored in a dark environment and the chosen storage container is free from contamination, the solutions can remain suspended for a minimum of six months, and often even longer.

How fast is the generator? | In the absence of the optional "Accelerating Agent," the SilverLungs Generator can produce a 10 PPM solution in around 100 minutes, with a 20 PPM solution taking about 150 minutes to achieve. However, the inclusion of the "Accelerating Agent" significantly reduces production time by 50%, resulting in a considerably shorter duration compared to the standard process without its use.

Which PPM is best? | The choice of PPM concentration in a silver solution ultimately depends on your personal preference and intended usage. The only distinction between the two power levels in terms of the silver generated is the variance in overall silver concentration. The production time required to achieve a 10 PPM solution versus a 20 PPM solution is approximately one hour.

How long do the silver electrodes last? | The SilverLungs electrodes demonstrate remarkable longevity, even with continuous use. To preserve their integrity, it is highly recommended to exclusively rely on the provided 100% copper polishing pad for cleaning purposes. Abrasive scrubbers, despite appearing suitable, are actually excessively harsh and composed of inappropriate materials. They can swiftly remove significant amounts of valuable silver from the delicate electrodes, far exceeding the silver lost during the actual silver production process. To safeguard the electrodes and minimize silver wastage, it is essential to utilize the gentle 100% copper polishing pad as the sole method for cleaning.

Copper shares a similar metallic "hardness" to silver, allowing them to complement each other during cleaning, resulting in a polished finish on the silver electrodes instead of excessive scuffing or scratching.

Are the electrodes pure? | The SilverLungs Generator employs electrodes crafted from 99.99% pure elemental silver, guaranteeing the production of high-quality solutions. These electrodes are meticulously polished and feature a smooth design, facilitating an even electrical flow during the electrolysis process. Their large size and extensive contact area with the water ensure their lifespan, long-lasting durability and optimal performance.

Why use a laser pointer? | A red laser pointer proves to be a valuable tool for evaluating the quality of a silver solution. By shining the laser through the solution, one can easily detect the presence of unwanted large silver complexes. This simple yet effective method serves as a convenient way to assess the current state and quality of the silver solution. We specifically opt for a red laser due to its wavelength, which is better suited for revealing large particles in the solution. While green lasers are commonly used, their wavelength differs to such an extent that even pure distilled water would display a misleading beam, which would otherwise remain invisible with a red laser. In other words, the use of a green laser can cause a false alarm in many cases.

What is magnetic stirring? | The SilverLungs Generator incorporates a distinctive magnetic stirring system that operates without requiring an unsealed flask during production. This design effectively shields the solution from airborne contaminants, safeguarding its purity. Unlike turbulent stirring methods such as "bubblers," which can dislodge excessive silver hydroxide buildup, the SilverLungs Generator's magnetic stirring system eliminates this concern entirely. As a result, the silver production process remains clean and efficient, leading to the creation of a superior silver solution.

Dynamic polarity reversal? | Standard polarity reversal is indeed a valuable feature in a silver generator as it helps evenly distribute the wear and load between the electrodes. However, dynamic polarity reversal technology takes this concept further by incorporating precise and continuously changing timing intervals. This surpasses the limitations of traditional "fixed timing" methods. By utilizing dynamic polarity reversal, the accumulation of aggregated excess silver accumulation on the electrodes is significantly reduced. This advancement enhances the overall efficiency and effectiveness of the process, leading to improved results in terms of efficiency and effectiveness.

Why use a water test meter? | Our digital water test meter plays a vital role in evaluating the initial quality of the water source being used for production and accurately measuring dissolved silver. This meter is comes pre-calibrated, ensuring precise and reliable readings.

Why only distilled water? | The use of distilled water exclusively in the SilverLungs Generator is essential for producing a high-quality silver solution. Water that has not been properly distilled or deionized may contain impurities that can negatively impact the final quality and effectiveness of the silver solution. To ensure optimal results, it is crucial to avoid any additives or substances other than the optional "Accelerating Agent" provided by SilverLungs. By maintaining a process that involves pure silver and pure water, the production of a clean and effective silver solution is guaranteed.

Contact SilverLungs

Please feel free to contact us at any time! We are here to help!



Hours of Operation

9:00 a.m. to 5:00 p.m. (EST)
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