INSTRUCTIONS FOR SILVER COLLOID ATTACHMENT
Highest Quality Meathod For Making Silver Colloid
2/30/97 Rev. 9/99

We have been told that this method is becoming the preferred method It produces a high quality colloid of even smaller particles and helps ensure an even longer shelf life for storage. The procedure is as follows:

STARTER SOLUTION
1) Bring 8 ounces of distilled water to a boil in a very clean glass container. You can use the distilled water available at your local supermarket. We suggest a Pyrex(tm) glass for boiling water. The hotter the water temperature, the finer the particles will be and it will make the silver colloid faster.

NEVER USE metal containers for making starter solution.
NEVER USE metal containers for making silver colloid.
NEVER USE metal containers for storing silver colloid or the starter solution.

2) Insert the silver probe into the silver colloid jack on the right side of the box. Test the output by momentarily touching the two silver probes together. The LED light should then glow. If not, see troubleshooting.

3) Then place the silver electrode wires into a tall, narrow glass so as approximately 90% of the silver probes are covered by the hot water. The electrodes should be parallel to, but not touching each other. You may bend the silver wires to fit the glass you use.

4) Turn the on/off knob clockwise just until the PgS][clicks on. Leave it on for no more than one hour. It is often done in 15-20 minutes. Wrap a towel around the glass to keep it as warm as possible. You will have to keep watch on the solution. Look for the silver probes getting black to the point of gray matter build up. If this happens, remove the probes momentarily and clean them with the scrub pad. Then put them back into the solution.

Watch for a change in color in the solution. Depending on the water you used and posibly other conditions, *this process may take less than 1 hour*. The solution starts out clear, if you notice it changing to a yellow or golden color or possibly orange, this is an indicator that the starter solution is done. Even if it has been less than one hour.

If at the end of one hour, the color is still clear, cloudy or yellow, this is good. At the end of one hour, turn the PgS][off. The starter solution is now complete, which you can now use this for 4 batches of silver colloid.

5) Put 2 ounces of starter solution and 6 ounces of hot distilled water into a glass. Similar to making the starter solution, probes 90% covered, parallel but not touching.

6) Turn the on/off knob clockwise until it just clicks on. Leave the PgS][on for 10 minutes per 8 ounce will produce a solution of approximately 5 parts per million. You may or may not see a white haze coming off the electrode as you did if you had previously used the salt solution.

Note: Use the last 2 ounces of starter solution to make more starter solution. Place the last 2 ounces in 6 ounces of heated distilled water and follow the same directions for making starter solution. #1 through #4.

When properly stored, the silver colloid solution made this way can last many months.

Best storage is a dark glass bottle that are usually available at photography supply stores. If only plastic is available, use a cleaned hydrogen peroxide bottle. NEVER USE metal containers.

Store in a cool dark place. Do not expose to sunlight or room light as this degrades colloidal silver by neutralizing the positive charge on silver ions that helps keep the particles in suspension. This causes the solution to turn gray or black.

DO NOT refrigerate or freeze.
DO NOT expose to rapid temperature changes.
Always SHAKE solution before using it.

THE COLOR OF COLLOIDAL SILVER is to a large extent dependent on the water quality and cleanliness of the probes. The color may vary from a clear to cloudy to a golden or yellowish color.

If you see excessive grey FLAKES OR CLUMPING IN MAKING THE SILVER COLLOID at the top or at the bottom of the glass, this is caused caused by either:
a) the water has too many minerals in it and you need to find a purer source
or
b) the silver wires have built up too much oxide , in which case you need to thoroughly scrub up and down the length of the silver with the scrub pad. Hold the silver wire when cleaning as not to pull the silver from the wire.
Also, if your solution is turning dark gray or black. You are leaving the silver probes in the water for too long. This dark gray or black solution is unusable and should be discarded.

* It is typical for some clumping/flaking to occur.

The grey matter pulls some of the silver out of the solution. This does decrease the effectiveness by a still undetermined amount, but if you want to save this lower concentration solution by filtering it through a coffee filter, it would be appropriate for pet or plant use .

Updates: As always Action Electronics list any revisions, updates or news on the internet. www.action-electronics.com/ps.htm

CLEANING SILVER PROBES
The probes should be shiny and free of sediment before using them to make your colloidal silver. If you see a dark gray or black color on the probes, gently clean them with a small section of scrub pad. (enclosed) Clean probes before and after every use. Always hold the top of the silver when cleaning, DO NOT hold the black wire as you can pull the silver leads out.

TROUBLESHOOTING
The units design has a power save feature. The bicolor LED (Red/Green) battery indicator light will blink only when the stainless steel electrodes are NOT plugged in and the unit is turned on. If the bicolor LED does not blink when the unit is turned on, or if the incandescent light does not glow when the silver electrodes are touched together, check that the battery connections are tight, check the batteries with a battery tester and replace if necessary.

A Simple Method of Making Silver Colloid
Fill one quart Mason jar with distilled water. Place in the center of the two to four quart cooking pot, filled as high as possible with boiling water. (Turn burner to medium low after water reaches boiling point) After ten minutes, place probes into Mason jar, turn your unit on and keep stove on for 3/4 to 1.5 hours. At this point your solution develops a slight yellow hue, visible under bright light against appliance white (or against sheets of clean typing paper). Your 3 to 6 ppm solution is now done. Turn off the heat, clean the probes, allow the solution to cool before removing and labeling the jar. Do not produce over under direct sunlight.

We have given you a few methods, just find the method that works best for you and suits your needs!