

FOR YOUR HEALTH. FOR YOUR LIFE.

MESOSILVER® | MESOGOLD® | MESOCOPPER® | MESOPLATINUM® | MESOZINC™



Live feeling great.



*Maintain a robust immune system for
Optimum Health with Purest Colloids...
dietary supplements for health.*

The Finest Colloidal Products



Feel the difference.

Our mission is to produce the finest colloidal products, therefore providing the highest level of effectiveness. Purest Colloids offers superior metal colloid products for use as dietary supplements. To maintain a robust immune system for optimum health, Mesocolloids contain minerals in trace amounts that our bodies can use. Our products are in the forefront of quality and effectiveness because we maximize the Particle Surface Area of the nanometer-sized particles. For quality and safety all Mesocolloids are manufactured in an FDA Registered Facility.

This brochure discusses our products:

- **MesoSilver**®
- **MesoGold**®
- **MesoCopper**®
- **MesoPlatinum**®
- **MesoZinc**™
- **MesoSilica**™
- **Mesolridium**™
- **Meso Skin Conditioners**™
- **Hot Tub Silver**™

Purest Colloids also offers MesoPalladium™. We also offer supplements such as probiotics and multivitamins on page 9, but we do not manufacture those products.

More information can be found at:
www.purestcolloids.com

The statements in this brochure have not been evaluated by the FDA. Nothing in this brochure is intended to diagnose, cure, prevent or treat any disease.

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Colloidal Silver - MesoSilver® Brand

MesoSilver is 0.9999 pure silver in colloidal form, a true silver colloid.

- All-natural dietary mineral supplement
- Contains only pure water and pure silver nanoparticles
- No adverse side effects have ever been reported
- **Will not cause argyria**, a discoloration of the skin caused by silver protein products and some forms of ionic silver
- No potentially dangerous protein additives
- Does not interact or interfere with any medications
- **MesoSilver** is non-toxic. See Material Safety Data Sheet on our web site
- True colloidal silver, which is predominantly silver nanoparticles, not ions
- Highest nanoparticle concentration, typically 80% particles-others are only 10%. See chart on page 19
- Concentration is 20 ppm (minimum) total silver
- Smallest silver nanoparticles, 0.65 nm typical
- Highest Particle Surface Area ever measured for maximum effectiveness. See comparison table on page 13
- Manufactured in an FDA Registered Facility
- Highest bioavailability of any colloidal silver product due to sub-nanometer sized particles
- A true colloidal silver is dark amber in color, not clear like ionic silver solutions
- Is not photosensitive, hence does not require a dark colored container
- Made using the highest purity, sterile pharmaceutical-grade deionized water
- Does not require refrigeration after opening and has an indefinite shelf life

Uses:

- Supports a healthy immune system
- Promotes improved energy levels
- Promotes healthy sunburn relief

Contraindications:

Do not use if you are allergic to silver.



Colloidal Gold - MesoGold® Brand

MesoGold is 0.9999 pure gold in colloidal form.

- All-natural dietary mineral supplement
- Contains only pure water and pure gold nanoparticles
- No adverse side effects have ever been reported
- Does not interact or interfere with any medications
- **MesoGold** is non-toxic. See Material Safety Data Sheet on our web site
- True colloidal gold, no ionic content (not gold chloride which is a known neurotoxin)
- Concentration is 20 ppm (minimum) gold nanoparticles
- Smallest gold nanoparticles, 2-4 nm
- Highest Particle Surface Area for maximum effectiveness
- A true colloidal gold is ruby red in color
- Highest bioavailability of any colloidal gold product due to nanometer sized particles
- Tasteless liquid, tastes like water
- Made using the highest purity, sterile pharmaceutical-grade deionized water
- Does not require refrigeration after opening and has an indefinite shelf life
- Manufactured in an FDA Registered Facility

Uses:

- Supports mental focus and concentration
- Supports improved hand-eye coordination
- Promotes improved memory and a general feeling of well being
- Promotes improved energy levels

Contraindications:

Do not use if you are allergic to gold.

Since taking MesoGold, I've noticed an increase in dexterity and hand-eye coordination. My reflexes and responses are much quicker and more effective. The most noticeable effect of the MesoGold came for me in recent ground school and flight simulator training. My simulation partner was a much more knowledgeable and experienced pilot, so I expected him to be better than me in the simulation, but I actually outperformed him.

***Joe B., Age 47, New Jersey
Commercial Airline Pilot***



Colloidal Copper - MesoCopper® Brand

MesoCopper 0.9999 pure copper in colloidal form.

- All-natural dietary mineral supplement
- Contains only pure water and pure copper nanoparticles
- No adverse side effects have ever been reported
- **MesoCopper** is non-toxic. See Material Safety Data Sheet on our web site
- True colloidal copper, not ionic copper which has a metallic taste
- Concentration is 10 ppm (minimum) total copper
- Small copper nanoparticles, 20 nm typical
- High Particle Surface Area for maximum effectiveness
- High bioavailability due to small particles
- Made using the highest purity, sterile pharmaceutical-grade deionized water
- Does not require refrigeration after opening and has an indefinite unopened shelf life
- Manufactured in an FDA Registered Facility

Uses:

- Promotes healthy skin and rejuvenates collagen and elastin
- Reduces the appearance of fine lines and wrinkles
- Supports healthy cartilage and tendon regeneration
- Plays a critical role in cellular energy production, bone formation, and metabolism of the neurotransmitters norepinephrine, epinephrine, and dopamine
- Helps maintain the integrity of connective tissue in the heart and blood vessels
- Functions as an antioxidant
- Necessary for red blood cell formation, normal iron metabolism, and increases the body's ability to absorb iron
- Copper is known to play an important role in the development and maintenance of immune system function

Contraindications:

Do not use if you are allergic to copper or if you have Wilson's disease.

Since using MesoCopper my skin has a wonderful glow and it evened out my skin tone. Even other people are noticing; the other day, my mother said to me, "Your skin looks like it's glowing!"

**Lisa P., Age 39,
New Jersey**



Colloidal Platinum - MesoPlatinum® Brand

MesoPlatinum 0.9995 pure platinum in colloidal form

- All-natural dietary mineral supplement
- Contains only pure water and pure platinum nanoparticles
- No adverse side effects have ever been reported
- Does not interact or interfere with any medications
- **MesoPlatinum** is non-toxic. See Material Safety Data Sheet on our web site
- True colloidal platinum, no ionic content
- Concentration is 10 ppm (minimum) platinum nanoparticles
- Smallest platinum nanoparticles, 15-20 nm
- Highest Particle Surface Area for maximum effectiveness
- Highest bioavailability due to small particles
- Tasteless liquid, tastes like water
- Made using the highest purity, sterile pharmaceutical-grade deionized water
- Does not require refrigeration after opening and has an indefinite shelf life
- Manufactured in an FDA Registered Facility

Uses:

- Supports healthy tissue regeneration of the heart tissue, thymus and the entire endocrine system
- Promotes lucid dreaming
- Promotes improved memory
- Supports DNA repair and nerve tissue regeneration
- Promotes increased libido in both males and females

Contraindications:

Do not use if you are allergic to platinum.

***Taking MesoPlatinum,** has increased my libido—and at my age, I can use a little help. I have sexual urges now like I did in my 20s and 30s, and I get turned on a lot more. When you're married, it's important to have a healthy sexual relationship, and the **MesoPlatinum** improves things in that area all the way around. It has made me feel quite youthful!*

K. Scott, Age 55, Exeter, PA



Colloidal Zinc - MesoZinc™ Brand

MesoZinc 0.9995 pure zinc in colloidal form

- All-natural dietary mineral supplement
- Contains only pure water and pure zinc nanoparticles
- No adverse side effects have ever been reported
- **MesoZinc** is non-toxic. See Material Safety Data Sheet on our web site
- True colloidal zinc, no ionic content
- Concentration is 30 ppm (minimum) total zinc
- Small zinc nanoparticles, 20 nm typical
- High Particle Surface Area for maximum effectiveness
- High bioavailability due to small particles
- Made using the highest purity, sterile pharmaceutical-grade deionized water
- Does not require refrigeration after opening and has an indefinite unopened shelf life
- Manufactured in an FDA Registered Facility

Uses:

- Functions as an antioxidant
- Supports a healthy immune system
- Promotes healthy skin
- Supports healthy cartilage regeneration
- Supports healthy tissue regeneration
- Promotes improved cellular metabolism
- May help encourage normal cell functioning
- Supports improved male performance

Contraindications:

Do not use if you are allergic to zinc.



Colloidal Silica - MesoSilica™ Brand

MesoSilica is 0.999 pure silica in colloidal form

- All-natural dietary mineral supplement
- Contains only pure water and pure silica nanoparticles
- No adverse side effects have ever been reported
- Does not interact or interfere with any medications
- **MesoSilica** is non-toxic. See Material Safety Data Sheet on our web site
- True colloidal silica, not ionic silica
- Concentration: 600 ppm (minimum) total silica
- Small silica nanoparticles, 6 nm typical
- High particle surface area for maximum effectiveness
- High bioavailability due to small particles.
- Made using the highest purity, sterile pharmaceutical-grade deionized water
- Does not require refrigeration after opening and has an indefinite shelf life
- Manufactured in an FDA Registered Facility

Uses:

- An essential element in the body
- Promotes healthy skin and rejuvenates collagen and elastin
- Reduces the appearance of fine lines and wrinkles
- Supports healthy skin, cartilage and tendon regeneration
- Plays a critical role in bone formation and collagen synthesis
- Helps maintain the integrity of connective tissue in the heart and blood vessels
- Promotes improved memory and a general feeling of well being
- May reduce the signs associated with age-related mental decline

Contraindications:

Do not use if you have an allergy to silica.



Colloidal Iridium - Mesolridium™ Brand

Mesolridium is 0.998 pure iridium in colloidal form

Uses:

- All-natural dietary mineral supplement
 - Contains only pure water and pure iridium nanoparticles
 - No adverse side effects have ever been reported
 - Does not interact or interfere with any medications
 - **Mesolridium** is non-toxic. See Material Safety Data Sheet on our web site
 - True colloidal iridium, not ionic iridium
 - Concentration: 10 ppm (minimum) total iridium
 - Small iridium nanoparticles, 20 nm typical
 - High particle surface area for maximum effectiveness
 - High bioavailability due to small particles
 - Made using the highest purity, sterile pharmaceutical-grade deionized water
 - Does not require refrigeration after opening and has an indefinite shelf life
 - Manufactured in an FDA Registered Facility
- Promotes improved cellular metabolism
 - Promotes enhanced mental acuity
 - Supports healthy tissue regeneration
 - May help encourage normal cell functioning
 - High-level spiritual adepts (monks, ministers) and individuals who meditate regularly report that iridium induces higher states of awareness and enhances meditative states

Contraindications:

Do not use if you have an allergy to iridium.

Mesolridium resonates and vitalizes with the power of cosmic light and consciousness.

V.T., Ordained Minister



Meso Skin Conditioners™

Introducing MesoSilver, MesoGold, MesoPlatinum, MesoPalladium, Mesolridium, MesoZinc, MesoSilica & our preexisting MesoCopper, as Skin Conditioner products.

- All products made under the same GMP (Good Manufacturing Practices) protocols as our dietary supplements
- All products are the same purity and strength as our dietary supplements



Hot Tub Silver™

This is for reducing or eliminating the need for chemicals in Hot Tubs, NOT FOR HUMAN CONSUMPTION

- All-natural ingredients
- Contains only pure water and 0.9999 silver nanoparticles
- No adverse reactions have ever been reported
- Hot Tub Silver™ is non-toxic. See Material Safety Data Sheet on our web site
- Concentration: 200 ppm total silver (estimated, each batch is not certified)
- Made using the highest purity, sterile pharmaceutical-grade deionized water
- Has an indefinite shelf life

Uses:

- NOT FOR HUMAN CONSUMPTION (NOT the same as MesoSilver)
- Reduces or may eliminate the need for harsh chemicals in hot tubs
- Promotes soft and healthy feeling skin
- Anti-bacterial, anti-fungal
- Controls the growth of microbes
- 1 bottle treats up to 440 gallons
- We recommend Spa Bromine for use with Hot Tub Silver



Nutritional Supplements & Probiotics

Although we do not manufacture these supplements, we feel these choices are the finest available. We offer Theralac[®] and Truflora[®] probiotics products, as well as multivitamins and other supplements from Dr. Fuhrman.

In the digestive tract, beneficial bacteria inhibit the growth of Candida (which is a fungus). A probiotic adds beneficial bacteria to the digestive tract; therefore, we feel that most people could benefit from taking a probiotic. Higher doses of colloidal silver may negatively impact the beneficial bacteria. These bacteria can simply be repopulated by taking a probiotic, which should be taken at a different time of the day than the colloidal silver.



We also feel most people could benefit from a multivitamin for many reasons; such as, the fruits and vegetables being harvested today have less nutrients than those of the past, due to soil depletion and other factors. Further, studies have also shown that many individuals are deficient in vitamin D, hence we offer that supplement as well. We also carry children's multivitamins and more.



You can find out more specific information on these products at our website.



Theralac and Trueflora are registered trademarks of Master Supplements, Inc.



What are Mesocolloids™ and Mesoparticles?

Colloids are natural suspensions of particles in liquid. For example, milk is a colloid. Mesocolloids is a trademarked name that refers to an entire group of metal colloids that are produced using the Mesoprocess™. The term Mesocolloids was coined by the scientists at Colloidal Science Labs, who developed the proprietary method of producing colloids consisting of Mesoparticles.

Mesoparticles are very small nanoparticles whose size is greater than an atom but smaller than conventional small particles. Sizes range from sub-nanometer to 20 nanometers in diameter and typically consist of 10 atoms - 30,000 atoms per particle.

Mesocolloids combine small particle size and high concentration of particles yielding the highest Particle Surface Area that is many times greater than colloids produced by other methods. Mesocolloids consist of pure elemental mesoparticles dispersed in ultra-pure deionized water.

Uses for Colloidal Metals

While we make no health claims about the use or effectiveness of our product line, our customers have found our products helpful in a wide variety of applications:

- ***Immune System Support***
- ***Stress Relief***
- ***Mental Focus and Concentration Enhancement***
- ***Improved Sports Performance***
- ***Energy Level Boost***
- ***Trace Mineral Supplementation***
- ***Healthy Sunburn Relief***
- ***Skin Conditioning Support***
- ***Connective Tissue Reinforcement***
- ***Healthy Libido Extension***
- ***Increased General Feeling of Well Being***

Compared to colloidal products produced by other methods, Mesocolloids have the highest Particle Surface Area because of the combination of small particle size and high concentration of particles.

See the Comparison Table on page 13.

Colloidal Silver Effectiveness

What is Particle Surface Area?

In the world of colloids, Particle Surface Area is the property of a colloid that directly determines its ability to react with the environment. Therefore, the effectiveness of colloidal silver is determined by Particle Surface Area. The higher the Particle Surface Area the more effective the colloidal silver. Particle Surface Area is defined as the total surface area in square centimeters (cm²) of all the particles in one milliliter (mL) of colloid.

In the booklet "Silver Colloids" Professor Ronald J. Gibbs wrote "The size of the particles in the colloidal silver suspensions we use

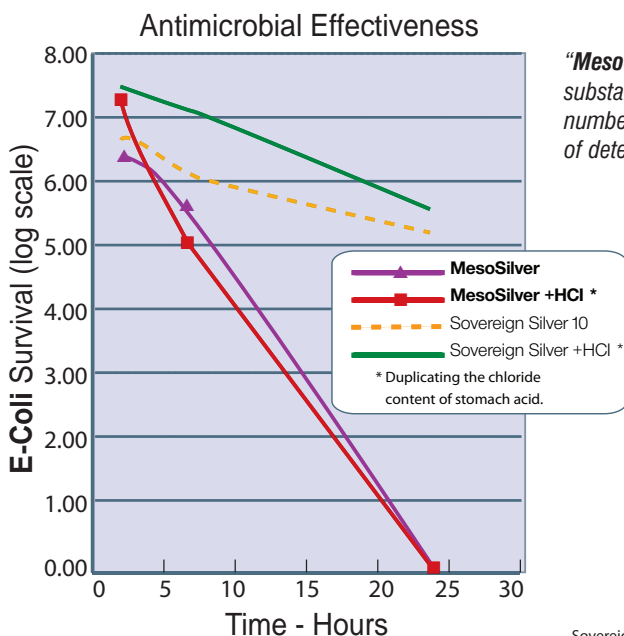


for health purposes is very important. Particle size controls the surface area and therefore the effectiveness of the colloidal silver suspension."

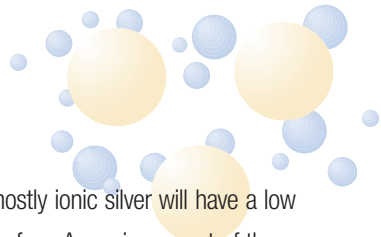
For this reason Particle Surface Area is the single most important property of colloidal silver. It is not uncommon

From EMSL Laboratories Summary

FDA Approved Laboratory



"MesoSilver 20 ppm was substantial in reducing the number of cells to below level of detection within 24 hours."



for non-technical readers to mistakenly believe that the concentration (ppm) of silver is the most important property. Companies selling silver protein type products will advertise very high values of silver concentration with the explanation that higher ppm concentrations are more effective but that is simply not true. In fact, silver protein products have very low values of Particle Surface Area owing to the very large size particles present in those products.

Colloid Particle Surface Area increases as the concentration of metal particles increases. Colloids that have a high percentage of their metal content in the form of nanoparticles will have high Particle Surface Area. Therefore, colloids

that are mostly ionic silver will have a low Particle Surface Area since most of the metal content is in the form of metal ions, not nanoparticles.

Colloid Particle Surface Area increases as the particle size decreases. The highest Particle Surface Area is achieved when there is a high concentration of nanometer or sub-nanometer sized particles. While this is the desired result, it is also the most difficult to achieve.

MesoSilver combines the smallest nanometer size particles and the highest particle concentration, a powerful combination of properties, to produce a colloidal silver product that has the highest Particle Surface Area of any colloidal silver product ever tested.



*I had tried colloidal silver in the past, with no results. A few months ago, someone convinced me to try **MesoSilver**. I didn't realize that there was such a difference in the types of colloidal silver, but apparently **MesoSilver** is much more effective than other types. Within two weeks of taking **MesoSilver**, I started to feel better... and within two months, I was pretty much back to normal...*

Michael C., Pennsylvania

Particle Surface Area Comparison Table

Product Name	Particle Surface Area cm ² / ml	Efficiency Index
Home Brewed w/ SG-7	0.024	1.64
Silver Shield Colloidal Silver	0.027	0.19
Silver Biotics 10	0.035	3.2
ASAP 10	0.112	10.2
Sovereign Silver 10	0.217	22.3
Ultra Pure Colloidal Silver 35	0.225	13.6
Argentyn 23 ppm	0.355	22.6
ASAP 22	0.587	26.3
Futurebiotics Adv. Col. Silver	0.591	61.6
Int. Pharm. Invive 50 ppm	0.621	4.4
Electra Clear Col. Silver 10 ppm	0.662	25.1
Source Naturals Col. Silver 30	0.881	24.3
Kelly Colloidal Silver 20	1.420	122
Utopia Advanced Col. Silver 20	12.20	924
Innovative Natural Product 500	12.39	20.5
MesoSilver 20	104.7	5235

Higher Values Are Best.

Column 3 **Efficiency Index** = Divide column 2 by total ppm value from the lab report and multiply by 1000.

The Comparison Table above shows how the Particle Surface Area of **MesoSilver** compares to other products.

Colloidal Silver Bioavailability?

Bioavailability of colloidal silver expresses the extent to which the colloidal silver arrives in the bloodstream unchanged in form. Silver nanoparticles are what provide the Particle Surface Area and also

constitute the silver that is able to enter the bloodstream unchanged in form, thus providing the high bioavailability. Products that are mostly ionic silver have low bioavailability. Silver ions cannot enter the bloodstream unchanged because they combine with chloride in the body and form silver chloride, an insoluble salt, which is biologically useless. That means that ionic silver products are substantially

less bioavailable than true colloidal silver products. (Most of the material that is published concerning the bioavailability of colloidal silver products misrepresents the true meaning of the term.)

It is clear from reading the Merck Manual that bioavailability is the amount of unchanged drug (or other substance) that reaches systemic circulation. In that regard, bioavailability of colloidal silver pertains to the fact that colloidal silver particles enter the bloodstream in the exact form in which they were ingested. We know that silver nanoparticles are absorbed in the first few feet of the small intestine and their presence can be measured using atomic absorption/emission spectroscopy beginning about 15 minutes after ingestion. The silver concentration of nanoparticles in the blood serum will continue to increase for

about 3 to 4 hours after ingestion and then start to taper off. Notice that the definition of bioavailability only concerns the amount of drug (or other substance) that reaches systemic circulation; it does not have anything to do with the ability of the substance to be metabolized by the body. It does not have anything to do with the substance being water soluble or combining with biological tissue. These concepts are important to remember because so much has been written that claims that silver nanoparticles are not bioavailable, when clearly any such statement is false. If they were not bioavailable, they would not enter the bloodstream.



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Here is an example of false and misleading information from an internet web site:

"...but the vast majority of the particles were elemental silver, and it was thus biologically inert... or unavailable."

Silver is a noble metal which means that it does not readily combine to form compounds. That means it is chemically inactive, but not biologically inactive. The biological activity of metallic silver nanoparticles does not require that the silver combine with biological or any other material in the body. Its action is one of being a catalyst, and as such it remains unchanged from its original form (silver nanoparticles). Silver nanoparticles, which are the predominant form of silver in true colloidal silver products, do not dissolve nor are they metabolized in the human body. They enter the body as silver nanoparticles; they circulate in

the bloodstream, then slowly leave the body and do not build up, while always remaining as silver nanoparticles. They perform their catalytic action while in the form of silver nanoparticles, their effectiveness being determined by their Particle Surface Area.

Three Types of Silver "Colloids"

When discussing metal colloids, such as colloidal silver, the term colloid means particles in suspension, which, for colloidal silver, means silver nanoparticles. There are three distinctly different types of silver that are labeled and sold on the market as "colloidal silver." They are silver protein, ionic silver, and true colloidal silver. Consumers seeking true colloidal silver are often at a disadvantage because each of these products represents itself as colloidal silver.



*I am a naturopathic doctor. I also have a doctorate in engineering and build medical equipment. **MesoGold** gives me lots of energy, keeps my mind sharp, and helps me be more willing to take on challenges. It's great stuff.*

**Bill Biagioli, NMD,
South Carolina**

Silver Protein Products

Most products claiming to be high concentrations of colloidal silver (typically in the range of 30 ppm to 20,000 ppm) are in fact silver protein products. While some of these products are labeled as Silver Protein or Mild Silver Protein, many such products are simply labeled as colloidal silver and the word protein does not appear anywhere on the label or in the product advertising literature. Silver protein products generally have very large silver particles, so large that they would not remain suspended as colloidal particles without protein additives. Of the three types of colloidal silver, silver protein

products have the lowest Particle Surface Area for a given concentration. This makes the silver inaccessible for safe human absorption and less effective for human use. Particle Surface Area, as we have previously discussed, is the single most important determinant of colloidal silver effectiveness.

Silver protein products have numerous dangers. Due to the high concentration of large silver particles, silver protein products are known to cause **argyria**, a condition that causes the skin to turn blue-gray. **MesoSilver** is not a silver protein product and does not cause argyria. Further, adding protein to colloidal silver supports the growth of bacteria in the product, according to Professor Ronald Gibbs who discussed this fact in his booklet **“Silver Colloids.”**

*I have been using colloidal silver in my practice for about 15 years. It never ceases to amaze me how many products claim to be the best and give their own reasons, testimonials, and “research” ... I have yet to find any product that I feel comes close to the quality, uniformity, and most important of all, ability to do its job, as **MesoSilver**.*

David Getoff, Naturopath and Board-Certified Clinical Nutritionist



Ionic Silver Solutions

Why is the distinction between Ionic silver and a true silver colloid important? Inside the human body ionic silver quickly combines with chloride to form an insoluble compound called silver chloride, which is essentially unreactive compared to metallic silver nanoparticles. In fact, **ionic silver cannot survive inside the human body.** In the digestive tract hydrochloric acid supplies the chloride ions that cause ionic silver to quickly form silver chloride.

If some ionic silver were to ever get into the bloodstream it would encounter a large supply of chloride ions and quickly form silver chloride due to the fact that blood serum is rich in sodium and potassium chloride. Only silver nanoparticles can survive inside the

body. Metallic silver nanoparticles are unaffected by chloride ions and will circulate in the bloodstream where it is believed they work their magic.

Ionic silver is also referred to as monatomic silver and silver hydrosol by some producers who choose not to describe their products using the scientifically correct terminology. These are marketing terms used to hide the truth that what is being sold is an ionic silver solution.

The producers of ionic silver solutions will suggest that colloidal silver should look like clear water, but this is incorrect. Companies that sell ionic silver claim that their product is “true colloidal silver” in an attempt to confuse the buyer. **Do not be fooled.** If the product is clear and





colorless, then it is ionic silver, not a true silver colloid. Colloidal *particles*, when present in sufficient concentration, absorb visible light causing the colloid to exhibit an “apparent color.” Silver *ions* do not absorb visible light and therefore appear as clear colorless liquids. Many producers of ionic silver recommend that the product be stored only in glass containers. Some specify only amber or cobalt glass bottles be used because their products are photosensitive and deteriorate when exposed to light. True colloids do not have these issues. Confusingly, ads for these products frequently claim that silver ions are small silver particles or describe the product as consisting of “ionic silver particles.” Silver ions are **not** the same as silver particles and the two terms are **not** interchangeable. The term colloidal means

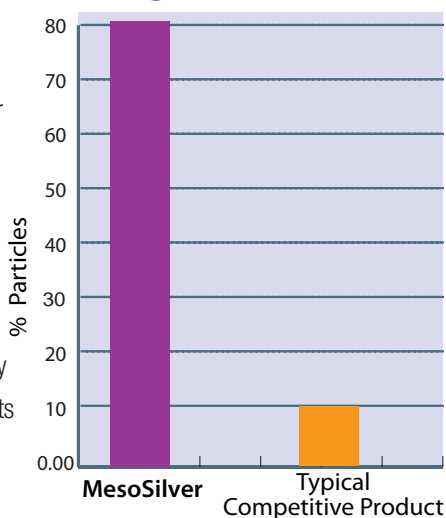
particles not ions, but producers of ionic silver products will try to convince the buyer that their product is a silver colloid. The common thread in most advertisements selling ionic silver products (labeled as colloidal silver) is to claim that ions are silver particles, or they try to blur the distinction by using the terms interchangeably. Another common trick is to display images made from a Transmission Electron Microscope (TEM) that they claim shows the small particles found in their products. These images do not show the silver particles in their products. They show silver oxide particles which are created during sample preparation.

The vast majority of products labeled and sold as colloidal silver fall into the category of ionic silver because it is very simple to make. All it takes to make ionic silver is a nine-volt battery and some



silver wire. It is simplicity in the extreme. Most products advertised as “colloidal silver” contain mostly silver ions, not silver particles, so technically they are silver solutions, not silver colloids. The silver content in these products predominantly consists of **silver ions** and a small percentage of silver particles. The silver ions are produced by electrolysis and may be described as “dissolved silver.” Products produced by electrolysis are frequently described as “electro colloids.”

Percentage of Silver Particles



Percentage of Silver Particles

Laboratory measurements conducted at the Colloidal Science Laboratory of dozens of commercially available products have found that the vast majority are typically 90% ionic silver and only 10% silver particles. This is like claiming a beverage is orange juice when it only contains 10% real orange juice and 90% something else. This is a blatantly deceptive practice.

In the case of colloidal silver producers, there is no association to urge compliance and to insure that products labeled as Colloidal Silver are in fact *true* colloids and not ionic solutions. Because there is no entity that enforces truth in labeling

of these products, there are dozens, if not hundreds of ionic silver solutions, masquerading as colloidal silver. Determining what percentage of the silver in a product is contained in particles, as opposed to ions, requires some sophisticated laboratory equipment. Most companies that produce colloidal silver products do not have this equipment available. In fact, it is rarely the case that the producers even know what their product consists of, or if they do, that information is not conveyed on the product label. In contrast, Purest Colloids has a comprehensive, in-house colloid laboratory.

True Silver Colloids

True colloidal silver products are the least prevalent type of colloidal silver on the market due to the high degree of manufacturing complexity and the resulting high cost of production. The nanometer-sized particles in true silver colloids remain in colloidal suspension without requiring protein or other additives. It is the mutual repulsion of the particles created by an electric charge *called the zeta potential* that keeps the particles uniformly distributed in the colloid. Due to the low concentration of ionic silver and small particle size, true silver colloids do **not** cause argyria, a condition that causes the skin to turn blue-gray.

The critical factor to look for in determining true colloids' effectiveness is Particle Surface Area. The more surface area of silver that is exposed to the environment (bloodstream) the more

effective it will be. Of all the types of silver marketed as "colloidal," true colloidal silver products have the highest Particle Surface Area. High Particle Surface Area is achieved by a high percentage of the content in the form of silver particles combined with very small sized particles. The ratio of Particle Surface Area to total silver content indicates how efficiently the colloid is able to produce Particle Surface Area, which determines effectiveness. Higher conversion efficiencies are more desirable. See table on page 13.

In true colloidal silver, the majority of the silver content is in the form of silver particles. Typically, true colloidal silver may contain 50% to 80% particles, while the balance (20% to 50%) will be silver ions.



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When referring to colloidal silver, the word *colloid* means silver particles, **not** ions. **MesoSilver** is a true silver colloid with typically 80% of its total silver in particles.

While it is easy to understand why the percentage of silver particles is important, that is only half the story. Of additional importance is the size of the particles. Smaller particles will provide a higher Particle Surface Area.

It is the combination of small particle size and high particle concentration that produces the maximum effectiveness (Highest Particle Surface Area) for a colloidal silver product. The only product offering this optimum combination of properties is **MesoSilver**.



*I am a 76 year-old cardiac patient with a pacemaker and an artificial hip. I had been feeling down and weak, but now that I'm taking the **MesoGold and MesoSilver**, I feel much more energetic than I've been - enough so that I'll definitely continue taking them.*

R. Willis, New Jersey

Glossary of Technical Terms

Argyria - a discoloration of the skin caused by silver protein products and some forms of ionic silver.

Bioavailability - the amount of unchanged substance that reaches the bloodstream.

Colloid - natural suspensions of particles in liquid. (Milk is a colloid)

Ions - an atom which has gained or lost an electron and therefore has a positive or negative charge.

Mesocolloid - a group of metal colloids produced using the Mesoprocess.

Mesoparticles - very small nanoparticles whose size is greater than an atom but smaller than conventional small particles.

Mesoprocess - proprietary method of producing colloids consisting of mesoparticles, unique to Purest Colloid's products.

Nanoparticle - a very small particle. (80,000 one nanometer particles are the width of a human hair)

Particle Surface Area - the property of a colloid that directly determines the ability of the colloid to react with its environment. Therefore, the effectiveness of a colloid is determined by PSA. PSA is the total surface area (cm²) of all the particles in one milliliter (mL) of colloid.

Zeta Potential - an electric charge that causes mutual repulsion of the particles and keeps them uniformly distributed in the colloid.

The Blue Man Fraud

By now nearly everyone has seen the story about Paul Karason, who the news media has dubbed "The Blue Man." The Blue Man story became a major media disinformation event which was produced by a public relations firm and paid for by a pharmaceutical interest. The purpose of this campaign was to scare the public away from using colloidal silver products. The tactic was to claim that the Blue Man's condition was caused by his use of colloidal silver thus implying that anyone who uses colloidal silver would suffer a similar fate. The entire story as presented is a study in blatant misrepresentation. The fact is that Paul has a condition called argyria that turns the skin a blue-gray color. He got this condition by taking his **homemade** silver compound that was mostly a high-concentration ionic silver solution. When he prepared the solution, he believed he was making colloidal silver. **He was not making colloidal silver.** To further make the solution even more dangerous, he added salt to the brew and then used electrolysis to make a high concentration of silver chloride with large particles, which is well known to cause argyria. He further applied the compound to his skin causing him to become an internal and external photographic plate. To finish himself off, he used a tanning bed to "fix" the silver in his body. The moral of the story is to know the difference between true colloidal silver and ionic silver or silver protein solutions, and don't try to make either at home! (True colloidal silver cannot be made at home.)

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Products Available

Silver, gold, copper, zinc, are available in 250 mL, 500 mL, 1 gal and 5 gal.

Silver is available in an antifungal 125 mL spray.

All products are available in skin conditioner 125 mL sprays and 250 mL refills.

Platinum, palladium, iridium & silica are available in 250 mL, 500 mL, and 1 gal.

Hot Tub Silver is only available in 500 mL.



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