

# *Liquid Silver Supplements*

## The American Biotech Labs Product Technology Difference

By Keith Moeller

### Introduction

There are many different silver products on the market today. The question is consistently asked what the difference is between the various types of silver supplement products. This report will give a basic understanding, in simple terms, of the types of silver supplement products currently sold, and what the differences are between them.

### What Are The Different Types of Silver Products

There are basically four types of silver products that shoppers may find listed on the supplement market:

1. A metallic nano particle solution with multiple modes of action
2. A metallic nano particle with one mode of action
3. An ionic form of silver (most common form)
4. An ionic form bound to a protein (usually called a mild silver protein)

#### 1, Metallic Nano Particle (multiple modes of action)

Only one product of this type currently exists, and it has been patented by American Biotech Labs (ABL). The particle consists of a metallic nano sized core with a thin, multivalent<sup>1</sup> silver oxide coating or “skin” on the outside of the particle. Nano particles are much more stable than other types of silver products. The ABL patented nano particle is much more stable than even regular nano particles because of the unique Ag<sup>4</sup>O<sup>4</sup> coating on the outside of its particles. In ABL’s patented production process, the silver in this multivalent oxide coating actually binds to the oxygen in the water molecules, holding the silver particle in place and changing the structure of the water (See material science reports; Rustum Roy, Penn State University). Another big difference is that this particle has multiple modes of action, including an ongoing ability to steal electrons, utilizing not a single shot, but more of a machine gun type of effect, not actually shooting, but taking unlimited electrons. Another unique mode of action to ABL’s particles is that each is permanently imbedded with a resonant frequency, which allows the particles to have a positive effect on things without needing direct contact with them. ABL has invested millions of dollars in silver research with its products. ABL has more than 280 reports and test series on its patented silver technology. These reports and test have been completed by more than 60 different universities, military/government labs, and numerous other independent labs, giving ABL one of the largest private information libraries on silver and its uses that exists today. This information has given, and is giving ABL the upper hand in further research and development of new silver products.

The ABL metallic nano particles cannot build up in your system because they are stable and not metabolized. In fact, a new ABL ingestion study is showing that the ABL silver nano particles wash out of the body within about 24 hours. This means that the ABL technology silver products cannot cause the blue man syndrome called argyria.

## **2, Metallic Nano Particle (single mode of action)**

A limited number of products exist in this category on the supplement market. They are characterized usually by having a yellow or brown color. They work because the outside of the silver particle oxidizes and loses an electron, which it wants to get back. It is the particle's ability to take that one electron back which gives the product its one mode of action.

## **3. Ionic Forms of Silver**

The most common forms of silver liquids found on the supplement market today are ionic or chemical forms of silver. They are the most common because they are the easiest to make. Many are made by just diluting down chemical forms of silver, like silver nitrate, to a certain part per million (PPM), which is then just bottled and sold to the public. Some are made by arcing electricity through silver rods into water, using either AC (alternating current, like in your house) or DC (direct current, using batteries) for manufacturing. Ionic products have the smallest particle size, because the silver molecules have been broken down into individual silver atoms. Usually they tout this as being a good thing, however, ionic forms of silver are the least stable and can fall out of solution very rapidly. This sometimes leaves a layer of muck on the bottom of the container that needs to be filtered off before it is bottled. Usually, ionic silver particles need to be bound to something in order to keep the silver in suspension (explained more in the silver protein section). Ionic silver particles have one mode of action. They work because they have a +1 charge, meaning each particle is missing one electron. Because of this, ionic forms of silver have the ability to steal that one electron back from something else. That is the only means by which ionic silver particles function. However, as soon as an ionic particle steals back its missing electron, it is then neutral. Once neutralized, the ionic silver particles have no further use. These atoms are then in a "happy" state, and have no ability to recharge themselves, or be at all useful anymore. The single use aspect of ionic forms of silver are the reason that these products usually have large amounts of contained silver in them. Where a metallic nano particle can perform its duties at a very low ppm levels, like 10 or even much less, ionic forms of silver are usually sold at levels of hundreds or even thousands of ppms of silver. These products need the higher silver levels because, in general, they are much less useful individually, it is a single shot use and then done technology. Another reason ionic forms of silver need higher ppm levels is because the silver ions can be bound up in the body's metabolism process and thus are not readily available to do their intended jobs.

Ionic forms of silver are not the best choice for human use for several reasons. The first reason is that much larger amounts of silver are contained and thus consumed by the individuals using these products. The second reason is that ionic forms of silver are metabolized and thus bound up in body systems. If ionic silver products are used at very high ppm's (large amounts of contained silver) over long periods of time, the ionic silver can build up in the system and cause a condition called argyria. Argyria is a condition where there is too much silver in the body for it to be eliminated through normal body excretion methods (i.e. going to the bathroom, breathing, sweating). In order to get rid of the excess ionic silver, the body just walls it off in the cells. This depositing of the ionic silver in the cells slowly turns the skin a blue or gray color, with the color increasing over time as excessive amounts are continually ingested. Argyria is only cosmetic in nature, meaning that it only affects one's outward appearance, there is no actual harm done to the body, organs, or how it functions. It can be compared to getting a full body, solid color tattoo, as the condition is permanent. I must again emphasize that this condition is very rare, and can only happen in instances where large amounts of very high ppm ionic silver are consumed daily over many years.

#### **4. Mild Silver Proteins**

Mild silver proteins are just another form of ionic silver. Because ionic forms of silver are not generally stable, and because they contain unusually large amounts of silver, they are sometimes bound to a protein. Binding the silver to a protein helps to make ionic silver products more stable and helps keep the silver in suspension longer. Once the ionic silver product has been made by diluting down chemicals or by arcing silver rods, protein is then mixed with the silver. An example of this type of protein would be Knox Gelatin (the stuff used to make jam). Once the ionic silver and the protein are mixed together, it is usually defined as a mild silver protein. The drawback to using the protein is that having the protein bound to the silver, makes the silver less functional or useful. The general rule is the more ingredients you mix with the silver, the less effective it becomes. Consequently, even higher levels of silver are needed to obtain the desired effect.

Potential side effects of using a silver protein are about the same as those of a regular form of ionic silver. Generally, they are not problematic to use, but could cause argyria if one with a high ppm of silver is misused over a long period of time.

#### **General Questions:**

##### **What is a PPM**

In the case of a silver liquid, a “ppm” or “part per million” is a measurement of the amount of silver contained within the liquid. For example, if a product stated that it contained 10 ppm of silver, it would mean that for every million parts of water there would be 10 parts of silver. That does not mean that there are 10 pieces of silver in the water, but rather, if all the silver in that water were added together, they would equal ten parts for every million parts of water.

##### **How Are Parts Per Million Measured**

It takes a very precise and usually expensive machine to determine how many parts per million of silver is actually in the water. Usually the ppm's are measured on one of four types of machines. Those machines are the AA machine (Atomic Absorption), DCPMS (Direct Coupled Plasma), ICPMS (Inductively Coupled Plasma), and an EM (Emissions Spectroscopy). These quality machines will measure accurately to parts per billion. It is important that the silver measurement be done on a quality machine so that the person can know how much silver he or she is actually consuming or ingesting. Most cases of argyria that I have seen, were people who made a silver product at home with a couple of batteries and some silver wire. They had no idea how much silver they were consuming daily. Some of the homemade colloidal silver machines we tested, produced a very inconsistent product, with a very different ppm level every time it was made. Some people try to measure silver content with a device that measures TDS, which is “Total Dissolved Solids”. TDS only tells you how much solid particulate is in the water, not what that particulate is. The dissolved solids could be salt, dirt, or just about anything else that can be in the water. There are many cheap devices on the market that do not give accurate readings. We tested some of them and found them to be very inaccurate in the readings. They are just not made to test things at very low parts per million. Also, just because a machine's readings are consistent, doesn't mean the readings are correct or accurate. The old adage “you get what you pay for” seems to hold true in this instance.

### Is Smaller Always Better In Silver Particles?

The statement “Smaller is always better” when it comes to silver nano-particles, is generally true, but only to a certain point. The actual answer was released in the data within American Biotech Labs’ patent (# 7,135,195). On page 11 of the patent, under the heading of “2. Size Analysis” it states, “ ***The smaller the average particle size, the greater the surface area and the greater the contribution of the particular surface chemistry. However, if the particles are excessively small there can be a loss of stability and/or other interactions that negatively affect the product.***” This indicates that there is an optimal particle size for usefulness of silver nano-particles. If the particle size becomes too small, like many ionic forms of silver, the product starts to lose stability and usefulness. The knowledge of optimal particle sizes has helped **American Biotech Labs file and receive patents on what the company deems the most active or most useful particle size.** American Biotech Labs now owns the rights to a composition of these particular particle sizes, and no other company or person can legally make a similar product within approximately the next 15 years.

### What About The Argument That Silver Is Not A Mineral That The Body Needs

B. M. Hegde, an internationally renowned medical doctor and peer review editor, in a lecture at Tia Sofia Institute, stated that what medical science knows could comparatively be held in one hand, and what medical science does not know would fill the rest of the universe. I think his meaning was that there is still so much we do not understand about our bodies, our environment, or our world, that what we do know is comparatively little. The medical industry as a whole is designed to only treat symptoms, not causes. They treat the disease, not what caused it. There is no treatment of the cause, because there is no sound understanding of what the specific cause could be for many of the individual cases. With so little accurate information available on vitamins, minerals and the body’s needs, few experts can agree on even the basic “do’s and don’ts” when it comes to supplementation. There are more than 80 governmental approved silver products, with numerous more on the way. As we continue to gain a better understanding of what this amazing silver metal can actually do for mankind, many misunderstandings and injustices will be corrected. American Biotech Labs has already amassed hundreds of tests and peer- reviewed published reports, which may give insight as to the potential future approved uses of this helpful metal.