

## EVALUATING COLLOIDAL SILVER PRODUCTS

The quality of a colloidal silver product can be determined by following the items outlined on this page. All of these items are important in choosing a high quality product. They include: the manufacturing process, purity, size of the silver particles, concentration (ppm, that is, parts per million), absence of chemical additives/chemical stabilizers and food coloring, pH, stability (shelf life) of the product, and efficacy. The product you purchase should meet the following criteria:

- 1. Manufacturing Process:** It should be manufactured by the electro-colloidal process, meaning that ultra-fine particles of silver are suspended in pure water by an electrical charge placed on the silver. This process is done without the use of chemical solvents or chemical stabilizers.
- 2. Purity:** High quality colloidal silver consists of pure water and 99.999% pharmaceutical grade silver. Manufacturers are required to conduct microbiology testing to guarantee that the product is free of contamination.
- 3. Particle Size:** To insure proper absorption and assimilation, the particles of silver should be less than one (1) micron in diameter.
- 4. Concentration:** For use on a regular basis the concentration should be between 5 and 20 ppm of silver. Highly concentrated colloidal silver products may be a health risk if taken internally on a regular basis and should only be used under a medical doctor's supervision.
- 5. Additives:** Colloidal silver should not contain any silver proteins, chemical stabilizers like E.D.T.A., P.V.P., carbopol resin, or any other chemical additive.
- 6. Color:** *The rule of thumb in colloidal chemistry is the smaller the silver particle size the lighter the color. Colloidal silver produced by modern technology should be clear to light yellow in color.* Avoid products that are murky, brown, grey, black, or that contain yellow food coloring. Golden yellow solutions are indicative of products containing a larger particle size, silver protein, or stabilizers, similar to the type of colloidal silver that was produced in the early 1900s.
- 7. PH:** The pH should be neutral (alkaline). Low pH (acidic) products can indicate the use of chemicals. It can also be an indication that the silver particles are 'falling out' of solution.
- 8. Shelf Life:** A quality colloidal silver product should have a guaranteed shelf life of more than one year. The solution should be free of any sediment or particles of silver floating in the liquid or settled on the bottom of the bottle. High quality colloidal silver can be bottled in plastic or glass without any effect on the product.
- 9. Outdated Technology:** Colloidal silver was commonly used in the early 1900s prior to the advent of antibiotics. At that time technology was not advanced enough to create colloidal silver without the use of chemical or protein stabilizers. These stabilizers 'block' the charge on the silver particles and bind to the silver to help keep it in suspension; however, it can cause the silver to be retained in the body too long. With today's advanced technology it is no longer necessary to manufacture colloidal silver using chemical or protein additives.

**10. Concentrates:** Concentrates of colloidal silver should not be diluted. Colloidal silver should be used in the same concentration in which it is formulated. When colloidal silver is manufactured correctly, the electrical charge is passed through the water and silver simultaneously. When colloidal silver concentrate is diluted by water the disruption in the electrical charge can significantly decrease the efficacy of the product.

**11. Tyndall Effect:** The Tyndall test is outdated. It was used decades ago by chemists to determine if a colloidal silver product contained any silver suspended in the solution. This method can still be used, but it only works for products containing large silver particles. In order to get a Tyndall effect the particles must be large enough to refract light. The new ultra-fine colloidal silver products that contain silver particles less than one micron in diameter will exhibit very little, if any, Tyndall effect, therefore rendering this type of test obsolete.

**12. FDA:** According to Federal regulations, colloidal silver must be manufactured in a registered FDA facility and be subject to strict quality control. Distributors of colloidal silver should be issued a certificate of analysis from the company from which they buy colloidal silver. This analysis should specify purity, microbiology testing, silver particle size, concentration (ppm), and use of chemical stabilizers, pH, and color.

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