

Berkey Biofilm Drops™

for Storing and Maintaining ~ Pure, Fresh, Water CONCENTRATE

Berkey Biofilm Drops™ have been scientifically engineered for use in the defense of biofilm formation in ceramic water filters, carbon(charcoal) filters, and water storage containers. Use **Berkey Biofilm Drops™** to extend the shelf life of water being stored for up to 5 years. **Berkey Biofilm Drops™** also extend the life of your elements. Using **Berkey Biofilm Drops™** eliminates the need to rotate your stored water every 6 months and keeps your water fresh tasting and odor free. You may test for residual ions in the water being stored by using the enclosed test kit.

Berkey Biofilm Drops™ are a scientifically engineered and patented Copper-Silver ion solution that is safe and user friendly. With 10 + years of development and testing behind the technology, **Berkey Biofilm Drops™** were designed as a pre-treatment to defend against microbiological growth and **control of biofilm buildup in filters and water storage containers.** **Berkey Biofilm Drops™** may be used with any type of filter media.

Although Copper, Silver Ionization Technology is not recognized as a sanitizer it does have a vital role in controlling bacteria. To understand how it works you first need to know the real cause of bacterial contamination, "biofilm". Studies have shown that copper/silver ionization is the most effective technology on the market today for the treatment of biofilm related bacteria. It is intended for use by anyone seeking a simple, convenient, and effective long-term water treatment solution. Researchers have estimated that 60%-80% of microbial infections in the body are caused by bacteria growing as a biofilm, as opposed to planktonic (free floating) bacteria.

Bio-film can be identified as a slimy feeling substance that is created by bacteria which enter the water through many sources. The bacteria create a slime that attaches to any damp surface area. Biofilms gather and attach to the side-walls of water storage containers, spigots, seals, lids, plumbing, filter housings, and filter cartridges. Once the bacteria attach they form colonies, and the biofilm protects the bacteria. These Biofilms can grow in filter media and remain hidden within the housing. Independent studies have shown that copper, silver ionization to date is the best proven method for the defense of biofilm contamination.

Biofilm is a substance that forms readily in water filters, water distribution lines, water storage tanks, and any other aqueous environments. Biofilms form when bacteria begin to excrete a slimy, sticky substance that allows them to adhere to surfaces. The biofilm mass can consist of multiple species of bacteria, and may include fungi, algae, and protozoa. Biofilm is resistant to chlorine, and it is difficult to control once initial adhesion occurs. The biofilm slime shelters disease-causing microorganisms, protecting them from chlorine disinfection.

The operating principles of **Berkey Biofilm Drops™** are cutting edge technology compared to that applied by traditional agents. The traditional use of sanitizing agents has been employed to destroy bacteria in the water. However, various scientific studies have demonstrated that up to 99% of bacteria do not actually live in the water, they live in the bio-film (a living environment and culture medium for bacteria). Leaving only 1% of bacteria that actually live in the water. It is only these free floating bacteria that are destroyed with traditional sanitizers such as chlorine, and bromine.

Berkey Biofilm Drops™ work by incorporating multiple barrier processes for inhibiting the growth and regrowth of biofilms, utilizing copper-silver ion technology along with its other additives and complexants to synergistically aid in the control and precipitation of calcium, iron, minerals and scale where biofilm bacteria breed, feed, form and attach, too.

While no system can guarantee 100% eradication of biofilm, **Berkey Biofilm Drops™** offers the best line of proven defense with long-lasting results.

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING OR DIRECTIONS FOR USE. READ BOTTLE LABEL AND ALL OTHER INSTRUCTIONS CAREFULLY, BEFORE USE! SAVE ALL INSTRUCTIONS FOR FUTURE REFERENCE.

Berkey Biofilm Drops™ for Storing and Maintaining ~ Pure, Fresh, Water

For use in tanks, jugs, quarts, gallons, drums, hydration packs, large water storage tanks and rain harvesting tanks. For use in RV's, Boats, Back Packs, Emergency Use, Humidifiers, and Water Filtering devices.

- * Simple to use.
- * Especially formulated for use in harvested rainwater containers, long term storage water containers, and for use in emergency preparedness and disaster relief.
- * Maintains purity and fresh tasting water.

DIRECTIONS FOR USE

WATER PREPARATION

1. Remove safety seal from **Berkey Biofilm Drops™** package. Do not use if seal is broken or missing.
2. Prepare **Berkey®** water system elements or other containers for filling by adding **Berkey Biofilm Drops™** with regular clear tap water.
3. Use **Berkey Biofilm Drops™** as a pretreatment to defend against biofilm buildup in ceramic filters and containers. Add 4 drops to each gallon of water. Examples: 2 1/2 gallon container x 4 drops per gallon = 10 drops. 30-gallon container x 4 drops per gallon = 120 drops. 55- gallon container add 10 mL or 1/3 oz. use enclosed vial as measuring device. See Filling & Storage Tips below.
4. It is significant to note that these levels are below the EPA's Maximum Allowed Levels (MAL) of 1.33 ppm and the World Health Organizations (WHO) of 2.0 ppm

CONTAINER FILLING & TREATING TIPS

- 55-Gallon Drums. For ease of use, the dropper tip may be carefully removed and fill 10 ml vial enclosed, and then add into a 55-gallon drum of water for long term storage.
- Smaller Containers. Follow instructions for Water Preparation above.

WATER STORAGE TIPS & TESTING

- Do not open container of stored water until water is needed. Once container is opened, use test kit to check for **Berkey Biofilm Drops™** residuals. Fill test tube with storage water half way, (5mL) then add 2 drops of test reagent to water. The test water in the vial should be a faint yellow to amber color if Copper ions are present. If water sample is clear, this means your storage water has been contaminated and you need to retreat water as per instructions; When test is successful, water may be used as needed.
- NMCL always recommends using the cleanest stored water available and running the stored water through your **Berkey®** system first, before use.
- Labeling: All containers of water used for long term storage should be labeled as drinking water. Date of storage and disinfection used at the time of storage should be attached or written on the container.

COPPER TEST- VISUAL COMPARISON. After filling the enclosed vial ½ full, put in 2 drops of the test liquid, replace cap and shake. Ideal results should be a light yellow/orange between the first and second color shades approximating chart below.

0	0.5	1	2
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