

Water Treatment for Biological Growth

It is important to fill the system with clean, potable (drinkable) distilled water, often sold in grocery stores. The distillation process eliminates microorganisms, ensuring a clean initial charge.

The cooling water in the system should be changed annually, to minimize total dissolved solid (TDS) and to help maintain pH.

It is also advisable to monitor the pH level throughout the year, maintaining a pH range from 7.5 to 9. Water naturally absorbs CO₂ from the atmosphere, forming a weak carbonic acid, driving pH levels down slowly over time. Sodium bicarbonate, a mildly alkaline powder, can be added to raise pH, if needed.

A 5 micron filter is very helpful in keeping the system clean, especially if used in conjunction with one of the additives described below. Another helpful change is to use opaque hoses to eliminate light, necessary for photosynthesis, from entering the water stream.

Check the system after one week of operation. If signs of biological growth (slimes on strainer, algae, bacteria, etc) start to form, flush the system using the method below:

DISINFECTION METHOD:

Add one pint of hydrogen peroxide in a 3% solution (found at most drug stores), per 15 gallons of water. Circulate 20-30 minutes. Drain the system and refill with clean, potable distilled water. Once the system has been flushed, you may use one of the following additives:

ADDITIVE 1:

A 10% solution of lab grade (no additives) ethylene glycol is recommended.

ADDITIVE 2:

Dichlorophene. This is a non-soluble white powder. It is a fungicide/bactericide and should be sprinkled evenly across the water surface of the entire tank. Contact ICN Biomedicals (see below) if you wish to use this product.

ICN Biomedicals, Inc.

P.O. Box 5023
Costa Mesa, CA 92626
Phone: 800-854-0530
Dichlorophene Catalog # 05201981

Please keep in mind that any additive must have the prior approval of the manufacturer of the equipment being cooled.

If you have any questions, please give us a call.

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