



## Aquarium Solutions® Ich-X®

SAFE & EFFECTIVE DISEASE CONTROL FOR FRESHWATER & MARINE AQUARIUMS

PRODUCT CODES: 73214 - 4 fl. oz, 73216 – 16 fl. oz and 73218 - 1 gallon

### PURPOSE AND BENEFITS

**Aquarium Solutions® Ich-X®** is a concentrated formulation of formalin and malachite green. It is based upon the famous Leteux-Meyer formulation, published in 1973, for treating ichthyophthiriasis ("ich") on scaleless catfishes. Leteux and Meyer found that the formulation they developed was not only more effective in treating this ubiquitous disease, but it was less toxic to the treated fishes than either drug used separately. This is the definition of synergism. **Aquarium Solutions® Ich-X®** is an improvement upon the Leteux-Meyer formulation because it uses malachite green chloride instead of the commonly used malachite green oxalate. The chloride form is less toxic than the oxalate form. **Aquarium Solutions® Ich-X®** is also useful in the treatment of other protozoan-caused diseases of fishes as well as fungal infections.

### GENERAL DIAGNOSIS AND TREATMENT OF "ICH" (ICHTHYOPHTHIRIASIS) DISEASE IN AQUARIUM FISHES

The following is a brief summary of the clinical signs often associated with "ich"; it is intended *only* as an aid for the beginning aquarist, and is not to be considered a definitive diagnostic key. It is important that the aquarist consult appropriate references for more specific information regarding aquarium fish diseases. Where possible, skin scrapes and/or gill smears should be made and examined by a qualified aquarium fish disease diagnostician (NOTE: few veterinarians are either qualified or interested in diagnosing aquarium fish diseases). The signs of "ich" in fishes is usually evident by the appearance and persistence of numerous, small (but visible) white spots on the fishes' skin, scales, eyes and fins. The disease is often called "white spot disease". These spots are known as cysts. It must be understood that the cysts are usually found on the gills of the diseased fishes. The only outward sign of the involvement of the fishes' gills is labored respiration that is often accompanied by a drastic darkening or lightening of the fishes overall coloration. Fishes with "ich", where the white spots are not yet visible on the body will usually exhibit lethargy and repeated "flashing", or scratching and scraping, against sides or bottom or against objects in the aquarium.

### CLINICAL SIGNS AND TREATMENT OF OTHER DISEASES OF AQUARIUM FISHES

The following signs are general and may appear with some or all of the signs indicated above.

**DISEASES CAUSED BY FUNGI (SAPROLEGNIASIS):** Saprolegniasis is often the easiest fish disease to properly diagnose. In most cases it is likely observed in aquarium fishes by areas of necrotic (dead) tissue covered with whitish, hairy, or "cottony" patches. This fungal disease is almost always a secondary infection caused by stress or injury. Treating the aquarium, as directed, with **Aquarium Solutions® Ich-X®** in addition to directly swabbing the visible lesions on the fishes will often affect a cure in 24 hours or less. Swabbing must be done with a clean, cotton swab, and the swab must never be dipped more than once into the container of **Aquarium Solutions® Ich-X®**. Be sure to have plenty of clean, dry swabs ready to use.

**TRICHODINIASIS:** This disease usually involves the gills and skin of the affected fishes. The diseased fishes produce excessive amounts of skin slime which causes a whitish cast to the skin color. Disease that is limited to the gills can cause severe respiratory distress. In koi, the disease may be limited to the gills. Use the standard treatment regime for **Aquarium Solutions® Ich-X®**.

**OODINIASIS (VELVET, GOLD DUST DISEASE, RUST DISEASE):** This disease is common to freshwater tropical fishes, and so may occur where these fishes are kept in either indoor or outdoor aquariums or ponds. The skin of diseased fishes appears to have been dusted with a fine powder. This disease is resistant to both salt and formalin treatment. It is treatable with malachite green, which makes standard **Aquarium Solutions® Ich-X®** treatment suitable.

### SPECIFICATIONS

**DOSAGE:** **Aquarium Solutions® Ich-X®** is dosed at a rate of one teaspoonful (≈5 mL) per 10 gallons of water. This produces a nominal concentration of 0.05 mg/L of malachite green and 15 mg/L of formalin.

### CONTRAINDICATIONS

**Aquarium Solutions® Ich-X®** is similar to other, weaker, formulations of malachite green and formalin; accidental or purposeful overdoses can kill pond fishes. Do not use on fishes which have had a history of problems with formalin/malachite green-containing treatments. Do not use in ponds for which the exact volume of water being treated is not known. Unless recommended by another authoritative source, do not use **Aquarium Solutions® Ich-X®** at greater than the minimum, standard dosage. Do not use treatments more often than once every eight (8) hours, and do not use where significant, pretreatment water changes are not possible. Pretreatments water changes will help insure that the aquarium water is not heavily contaminated with dissolved or suspended, organic or inorganic matter that can seriously impair fishes' respiration.

Generally, fishes under stressful conditions can tolerate as much **Aquarium Solutions® Ich-X®** as they can in the absence of stress. However, heavily diseased fishes must be treated with caution, and if signs of stress increase (e.g. "piping" or gulping at the water's surface, heavy coughing, head or body jerking, or sudden, unprovoked darting about) an immediate water change (at least 50%) must be made. Removing the fishes to untreated water will, of course, help mitigate adverse reactions. **Ich-X®** may be used in systems containing invertebrates such as shrimp, crayfish or snails, however, observe the reactions of these organisms carefully and remove them from the treated water if they show adverse reactions. **Aquarium Solutions® Ich-X®** is not for human or veterinary medical use. It is not for use on food or game fishes. It is not for use in open water ways, rivers, streams, canals, irrigation ditches, lakes, recreational ponds, nor in aquarium or pond systems which empty directly into any such waters. Do not use **Aquarium Solutions® Ich-X®** with any other drugs or treatments (this includes salt treatment). Remove carbon filtration, if used, and shut off foam fractionators ("protein skimmers"). Do not shut off water pumping, but cleaning mechanical filter media, prior to starting treatment, is recommended.

#### **STABILITY**

**Aquarium Solutions® Ich-X®** is stable for an indefinite period if kept in its original container and stored away from heat and cold. When not in use store tightly closed, at room temperature (above 60°F and below 100°F), and out of direct sunlight. Do not return unused portions to the original container.

#### **CAUTIONARY STATEMENTS**

**WARNING:** Undiluted **Aquarium Solutions® Ich-X®** is poisonous to humans and pets. **Ich-X®** may be fatal if swallowed. Do not get in eyes (may cause blindness) or on skin. Wash thoroughly with soap and warm water after handling. Keep away from food and feed.

**ANTIDOTE:** If swallowed call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person. In case of contact immediately flush skin or eyes with plenty of water for at least 15 minutes. For eyes, get medical attention.

**CALIFORNIA WARNING:** **Aquarium Solutions® Ich-X®** may contain ingredients known to the State of California to be potential or actual carcinogens (cancer causing) or teratogens (birth defects causing).

#### **STANDARD TREATMENT PROCEDURES**

The standard use-dilution of **Aquarium Solutions® Ich-X®** is 5 mL (1 teaspoon) per 10 gallons of water. Prior to starting treatment with **Aquarium Solutions® Ich-X®** perform a large, initial water change (at least 1/3 of the aquarium's present volume). It may be necessary to perform such water changes at least 24 hours in advance of the adding **Aquarium Solutions® Ich-X®** to the aquarium so that suitable water conditioners may be added. A nearly complete water change, prior to the use of **Aquarium Solutions® Ich-X®**, will often prove to be highly beneficial to the ultimate success of the treatment. Condition new water with **Pond Solutions® Ultimate®** or **Aquarium Solutions® Stress-X®** plus **Liquid Buffered Pond Solutions® ClorAm-X®** to remove ammonia, chlorine and chloramines. Repeat treatments, as necessary, with pre-dosing water changes of 10% to 25%. Repeat at least every 24 hours until a cure is affected. Re-treatment as often as every 8 hours is possible if the fishes can be closely observed and progress of the disease carefully observed. For such frequent re-treatments, the diseased fishes should be moved to an aquarium with suitable filtration. This will make the course of the treatment easily observable. For "ich", observation of the cycle of the appearance and disappearance of the white spots should dictate the course of the treatment. At those times when the spots are gone, or reduced in number, the **Aquarium Solutions® Ich-X®** should be re-dosed following a water change. Treatment should continue for three (3) days following the last visible signs of ich.

#### **PACKAGING**

**Aquarium Solutions® Ich-X®** is packaged in convenient 4 fl.oz., 16 fl.oz., and 1 gallon sizes. All containers are fitted with child resistant (CR) closures (caps).

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