



PRODUCT DATA SHEET

Amquel+®

Instant Water Detoxifier

PRODUCT DESCRIPTION:

Tap water may be safe for humans, but in most localities it is not safe for fishes and aquatic invertebrates. Tap water needs to be modified by using NovAqua+ when setting up aquariums and ponds, when making water changes, and when preparing salt water for marine aquariums.

NovAqua+ is the new generation of NovAquas, it is the latest stage of technological development in water conditioners for aquariums. NovAqua+ is the most effective of the tap water conditioners for benefiting aquatic life, but it goes far beyond that. NovAqua+ provides, in a single product, everything necessary to handle all of the needs when treating tap water for aquatic life (except nitrogen compound removal). For the removal of toxic nitrogen compounds ammonia/ammonium, nitrites, nitrates use Kordon's AmQuel+. NovAqua+ is recommended to be used with AmQuel+, with which it is fully compatible. Also see NOTE ABOUT COMBINATION PRODUCTS below).

ADVANTAGES:

1. **NovAqua+ provides multiple protective colloid coatings on the fish's body to replace or reinforce the natural slime coating that is essential to counteract injury, infection, and adverse environmental exposure.**

These organic polymers effectively shield wounds on fish, prevent the loss of internal fluids and electrolytes, and protect fish from external toxins and pathogens. The skin of fishes and many aquatic invertebrates is naturally fragile. It is covered by a protective slime coating that helps keep harmful bacteria and viruses away and aids the animals in their swimming ability by reducing surface friction. Any lessening of the slime coating, such as by abrasion and wounds can allow harmful pathogens to enter the skin. Fishes and invertebrates can sense when their slime coating is lessened or missing, and this can be very stressful to them. Fish being introduced to aquariums or ponds, or being transported, are particularly prone to losing natural slime and needing NovAqua+.

2. **NovAqua+ neutralizes chlorine and the full effect of chloramines**

Chloramines in municipal water supplies are a very serious problem for aquarists and pond keepers. Chloramines are a combination of chlorine and ammonia that together make a chemical compound that is much more stable and highly toxic to viruses and bacteria than either is alone. Chloramines are also very toxic to fishes and aquatic invertebrates.

Over 50% of all municipalities in the U.S. now have chloramines added to the water supply. The American Water Works Association now strongly recommends that all municipal water suppliers add chloramines to their water supply, because of increasing amounts of pathogens in water sources due to water pollution. Chloramines are are lethal to all water-breathing aquatic animals. It is becoming essential that aquarists and pond keepers use a chloramine remover in all water that they take from the tap for their fishes and aquatic invertebrates.

NovAqua+ neutralizes up to 3.75 ppm of chlorine (free and combined as chloramines), twice the amount that regular NovAqua removes. What NovAqua+ does not do is take out the ammonia that comes in the chloramines. This should be done by using Kordon's AmQuel+ (or original AmQuel) with NovAqua+.

EPA Guidelines set a maximum allowed level of chlorine of 4 ppm in public water supplies. Most water suppliers target 2-3 ppm chlorine. Note that 4 ppm of chlorine is actually 5.8 ppm chloramine. (The chlorine is 69% of the chloramine molecule, ammonia is the other 31%). So, with a possible 5.8 ppm chloramine, there is 4 ppm chlorine, and 1.8 ppm ammonia. At the extreme 4 ppm level of chlorine in chloramine, a 1.5 standard dose of NovAqua+ is recommended. Check with your local public water utility for the level of chlorine that they are adding to tap water.

3. **NovAqua+ buffers tap water**

When tap water is used, it comes out of the tap greatly reduced in oxygen. When tapwater that is low or devoid of oxygen comes in contact with the air its pH fluctuates rapidly while it is picking up oxygen and carbon dioxide. If tap water is added directly to the aquarium in which fishes and aquatic invertebrates are living, the fluctuations in pH can be very stressful, and may be lethal.



- NovAqua+ contains a high capacity buffering system that stops pH fluctuations in the water, stabilizes acidity/alkalinity to avoid pH shock, and allows fish to adapt safely to new environments.
4. **NovAqua+ detoxifies heavy metals that can be toxic to many aquatic organisms.**
Toxic metal ions in water can come from various sources, including home and commercial plumbing, medications, decorations and metal objects placed in the aquarium or pond, etc. It is essential to detoxify heavy metals in the water supply for the fish to survive. The detoxifying capability of NovAqua+ precipitates the metal ions into harmless compounds, rather than chelating them. NovAqua+ forms a unique insoluble, polymeric salt with heavy metals that is stable under conditions of both high and low pH. This is a notable advantage over other products that rely strictly upon the chelation process. Such chelates are unstable, pH dependent, and can exchange their "bound" metal ion for another, releasing toxic ions into the water. NovAqua+ capable of precipitating up to 1.17 ppm free copper ions (Cu++) from solution. When copper medications are used, the copper ions can combine with glass, plastic, rock, gravel, and other objects and remain indefinitely in this state, variations in pH (acidity/alkalinity) may cause the copper to come back into solution and be toxic to fishes and invertebrates. NovAqua+ permanently detoxifies copper and can be used to eliminate copper ion medications after their use as a treatment is completed.
 5. **NovAqua+ increases available electrolytes.**
Certain kinds and levels of electrolytes are necessary in the water for fishes and aquatic invertebrates to breathe through their gills. NovAqua+ contains these elements (cations and anions) in the amounts that fishes and aquatic invertebrates require. Marine fishes and invertebrates obtain their required ions by "drinking seawater". However, freshwater fishes and invertebrates do not have this capability. Freshwater fishes selectively remove required ions from water via the gills. The need for certain ions is increased during times of stress. NovAqua+ provides the electrolytes needed during periods of damage and shock in freshwater fishes. Also, NovAqua+ allows the use of bottled drinking water for aquarium use, that otherwise would be too deficient in ionic mineral content for the fishes and aquatic invertebrates to survive satisfactorily. NovAqua+ should be used when using RO (Reverse Osmosis) water, because efficient RO systems take out too much of the mineral/electrolyte content of the water for fish and invertebrates to remain healthy.
NovAqua+ should be used when using well water or other natural water source, because they can vary greatly in quality, which is brought into proper balance for fishes and invertebrates by NovAqua+..
 6. **NovAqua+ provides beneficial organic herbals and vitamins**
A unique new function of NovAqua+ is in its use of herbals and vitamins. More and more is becoming known in scientific aquaculture about the value of specific soluble herbals and vitamins for improving the health and immunity of fishes and invertebrates. Kordon is now applying this knowledge in aquarium and pond keeping. NovAqua+ contains herbals and vitamins that are soluble in water and absorbed by fishes and invertebrates; these have been recently accepted to be effective for their health and immunity. For examples, the vitamins used in NovAqua+ are capable of boosting disease-resisting immune functions, healing open wounds and sores, slowing the spread of infection, and promoting cellular regeneration such as in the formation of blood cells, etc. Echinaceas are in NovAqua+ for improving phagocytosis and as immune stimulators to help the fishes and invertebrates rid themselves of microbial infections both viral and bacteria, as well as tumors.
 7. **NovAqua+ enhances biofiltration in new aquariums and ponds**
It does this by coating the filter media with a slime coat that aids nitrifying bacteria in forming colonies, and in being more effective in carrying out biological filtration.
 8. **NovAqua+ reduces toxicity of nitrite.**
NovAqua+'s special chlorides help reduce the toxic effects of nitrite in the water by blocking the uptake of nitrite by the animal. For extensive removal of toxic nitrites in the water, use Kordon's AmQuel+.
 9. **NovAqua+ removes iodine**
When using iodine as a treatment, its effect can be reduced or eliminated by using NovAqua+.
 10. **NovAqua+ works with all filters, aerators, and protein skimmers**
There is no interference between NovAqua+ and all types of filters, protein skimmers, and aerators.



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SPECIFICATIONS

NovAqua+ is a unique combination of electrolytes, inorganic salts, buffering system, reducing agents (dechlorinators), synthetic polymers, vitamins, product stabilizers, and herbal extracts containing polysaccharides, alkylamides, and phenolics -- all of which variously produce highly desirable results in freshwater and marine systems for keeping fishes, invertebrates and plants alive and healthy.

NOVAQUA+ STANDARD DOSAGES

Standard doses for regular (aquarium) NovAqua+: Use 2 drops per gallon, or 1 teaspoon (approximately 5 ml) per 10 gallons of water, or 1 tablespoon (approx. 15 ml) per 30 gallons of water, or 1 fl oz for 60 gallons. When used at the recommended standard dose, 4 ounces of regular NovAqua+ will treat 240 gallons of water, 1 gallon of regular NovAqua+ will treat 7,680 gallons of water, 5 gallons of regular NovAqua+ will treat 38,400 gallons of water.

STABILITY Properly stored, NovAqua+ is stable for up to 5 years in its original solution. NovAqua+ must not be frozen. If the product is suspected of being frozen, inspect the contents for evidence of crystals. If crystals have formed, the product should be discarded. Normally NovAqua+ should have a clear to slightly cloudy appearance. Do not use if it has a milky appearance. NovAqua+ does not become toxic with age or freezing, but its effectiveness is reduced.

COMPATIBILITIES Kordon's NovAqua+ is compatible with all Kordon herbal products, all Kordon water conditioners, including Kordon's AmQuel and AmQuel+, all Kordon medications, as well as with the majority of non-oxidizing medications used in the control of fish diseases. NovAqua+ will precipitate ionic (non-chelated) copper but will react only slowly with chelated copper. This product is safe for use in new or established aquaria and ponds and will not interfere in normal biological filtration or with any of the nitrifying bacteria. When tap water sources contain chloramines, residual ammonia will remain after treating with NovAqua+. Use AmQuel+ or AmQuel to remove the toxic ammonia

CONTRAINDICATIONS NovAqua+ is not a registered medication or chemotherapeutic agent and is not indicated for any specific disease.

CAUTIONS No cautions are required in the use of this product. NovAqua+ does not reach toxic levels with regular use or upon accidental or purposeful overdose. It is safe for reef and "live rock" aquariums. NovAqua+ is non-toxic to humans, pets and aquatic life.

SUGGESTED USAGE IN AQUARIUMS & PONDS

It is recommended that NovAqua+ be used, rather than the original Kordon NovAqua, because NovAqua+ carries out much more in beneficial functions that improve aquarium and pond keeping. The use of NovAqua+ is suggested for the following conditions at the Standard dose (see also NOVAQUA STANDARD DOSAGES above).

New aquariums and ponds and water refills. Use at recommended standard dose. Add to the water when setting up a new tank or pond, preferably before the fish are added. Add to new water each time a water change is made. The amount of NovAqua+ to be used is determined by how much new water is added, not by the total amount of water in the aquarium or pond. The NovAqua+ will act quickly, normally within seconds, and at most a few minutes in conditioning the water. If water is suspected of containing chloramines (a chemical combination of chlorine and ammonia added by water utilities to the tap water) or natural ammonia (such as from animal excretions), the following procedure should be used to protect your fish and invertebrates: (1) Add NovAqua+ to protect the fish from stress, provide a protective slime coat, prevent shock; and remove the chlorine. (2) Add Kordon's AmQuel+ to remove all ammonia, including the ammonia in the chloramines, as well as to remove the nitrites, nitrates, toxic pheromones, and other toxic nitrogen compounds. (3) Add Kordon's Prevent Ich® to new aquariums or when adding new fish to act as a preventative for protozoan, dinoflagellate, and fungus infections. (4) To establish and accelerate the nitrogen cycle in the aquarium or pond, add Kordon's Zym-BacT. to provide the essential nitrifying bacteria.

Fish and invertebrate shipping/receiving. NovAqua+ can be added at the standard dose to the shipping water before fish or invertebrates are shipped and after receiving them. The use of NovAqua+ will reduce



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stress, osmotic shock and in some cases chemical poisoning. The use of NovAqua+ also reduces the probability of infection and increases the chances of recovery. It is recommended that Kordon's AmQuel+ also be added to shipping water to reduce toxic effects of free ammonia, nitrites, nitrates, and pheromones during shipping. Kordon's Prevent Ich or Ich Attack® should be added to control external single-celled infections.

Fish transport from shops. The use of NovAqua+ at the standard dose will reduce stress and osmotic shock. For regular NovAqua+ use at the recommended dosage (2 drops will treat 1 gallon). Add to the water in plastic bags containing the fish, before transporting from shop to home aquaria or ponds.

Transportation of aquarium and pond plants. Mix a solution of NovAqua+ at one-fourth standard dose. Dip each plant into the solution. Wrap for shipment. NovAqua+ acts as a humectant, holding moisture in the plants over extended periods of shipment. For a greater protective coating on the plants, such as in long-distance shipping, use Kordon's PolyAqua®.

Field collecting. Fewer losses will be incurred due to stress, osmotic shock and chemical poisoning, if newly captured fish and invertebrates specimens are transferred immediately to water pre-treated at the normal dose with NovAqua+ and Kordon's AmQuel+. If the fish or invertebrates are substantially abraded or wounded, the use of Kordon's PolyAqua is recommended. If the fish are suspected of being infected, the use of Kordon's herbal Prevent Ich or Ich Attack® is recommended.

WHAT ARE THE DIFFERENCES BETWEEN NOVAQUA AND NOVAQUA+?

- NovAqua+ is based on the latest technology for water conditioners, which have been under the NovAqua label with successive product improvements for over 30 years..
- NovAqua+ is formulated differently from its predecessors from the bottom up, having many new improvements, such as:
- New polymer colloids for fish protection
- Increased ability to remove chlorine
- New electrolytes for stress reduction
- New remover of heavy metals, including increased ability to remove toxic zinc, iron, aluminum, copper, etc.
- New herbal ingredients for immune health aids and viral and protozoan infection inhibition
- New vitamin ingredients for health aids
- New product stabilizers for long-lasting storage, etc.

NOTE ABOUT COMBINATION PRODUCTS

To answer the question "why not have all needs for a water conditioner in one bottle," the answer is that it is not practical. If combined, some things would have to be left out. It is best that they are in two or more products, such as is done with NovAqua+ and Kordon's AmQuel®+, which together cover the full range of components needed in water conditioning of tap water, as well as in treatment of water aging over time in aquariums and ponds..

There are products on the market that combine into one product the ammonia removal with other treatments for new water added to aquariums and ponds. Kordon recommends that the two products be kept separate, such as is done with NovAqua+ and Kordon's AmQuel+, in order to maintain long-term product stability and highest effectivity, as well as to provide useful ingredients that are not compatible when stored together in the same container.