BioZyme-AC  Pond Treatment

Biological Water Treatment

Ultra BioZyme-AC is a concentrated suspension of living beneficial good bacteria in a dormant state. Each liter contains more than 80 billion beneficial organisms. Many strains of beneficial bacteria have been selected to remove specific nutrients in your pond, raceway, tank, or hatchery. The organisms/enzymes in Ultra BioZyme-AC are not harmful to fish or man.

Treatment of your aquaculture system with Ultra BioZyme-AC, when water quality is poor or nutrient concentrations are high, allows you to operate your system at capacity.

Every successive treatment with Ultra BioZyme-AC liquid decreases the concentration of toxic nutrients and improves the balance of nutrients and microorganisms in your system. Isolated treatments can improve water quality temporarily. A program of successive treatments will consistently improve water quality.

Ultra Bio-Logics Inc.  International Export Division
Various Ammonia Levels Can be Treated

1- 1/2 ppm when total ammonia measures between 1.0 and 3.0 ppm. Repeat at a ½ ppm treatment every 3 to 4 weeks.

2- Use 1.0 ppm when total ammonia is higher than 3.0 ppm, or whenever ammonia levels begin to rise. Follow up with 1/2 ppm treatments every 4 weeks or whenever ammonia levels begin to rise.

B- Ammonia, nitrite and maintenance treatments should begin with 1 to 3 ppm and should be followed by 1/2 ppm treatments as needed to keep ammonia nitrite and algae levels low.

Typical benefits when used in fish and shrimp ponds:

* BREAKS DOWN FEED WASTES AND FISH MANURES
* PROVIDES LESS FLUCTUATION IN OXYGEN LEVELS
* BALANCES POND MICROORGANISMS
* PREVENTS BLUE GREEN ALGAE GROWTH
* IMPROVES WATER QUALITY AND CLARITY
* SAFE FOR USE IN AQUACULTURE FISH FARMING SYSTEMS
* REDUCES AMMONIA AND PHOSPHATES IN THE WATER
* ASSISTS IN BRINGING FISH ON FLAVOR
* CONTAINS NO HARMFUL DETERGENTS OR CHEMICALS
UltraDyne-A and C
New Safer Organic Disinfectant Alternative For AquaCulture

Note: The ingredients in UltraDyne-C is classed as food and feed grade, complexed with organic plant extracts of natural origin combined with citric acid to provide a free soluble active iodine, that is safe and effective, virtually non staining formula.

UltraDyne-C is an effective pond disinfectant when used at rates of 75 to 300 ppm titratable iodine, should be applied after every fish or shrimp harvest. (Refer to Use Solution Chart Below)

Once the Aquaculture pond, lake or tidal pool is emptied and the excess feed and fish wastes are removed, it must be thoroughly disinfected.

This is probably one of the most important applications to prevent cross-contamination of the new generation, which have not developed the immunity to the pathogenic organisms that remain from the previous harvest, embedded in the wastes at the bottom of the pond or in the plastic lining.

The use of UltraDyne-C is a simple spray on method and allow to air dry for 24 to 48 hours. In lined systems 75 to 100 ppm UltraDyne-C (available/titratable iodine), is an effective solution. In natural un-lined systems you must increase levels to 200 to 300 ppm, in order to penetrate into the soil/stoney bottom for thorough penetration.(Refer to Use Solution Chart Below)

If you do nothing else, do this to give your fish or crustations a clean non pathogenic start.

<table>
<thead>
<tr>
<th>MINIMUM TITRATABLE IODINE</th>
<th>ULTRADYNE-C-A CONCENTRATE WITH-</th>
<th>WATER IN LITERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 ppm Solution</td>
<td>3 ml. With-</td>
<td>500 ml</td>
</tr>
<tr>
<td>50  ppm Solution</td>
<td>3 ml. With-</td>
<td>1 Liter</td>
</tr>
<tr>
<td>25 ppm Solution</td>
<td>3 ml. With-</td>
<td>2 Liters</td>
</tr>
<tr>
<td>12½ ppm Solution</td>
<td>3 ml. With-</td>
<td>4 Liters</td>
</tr>
<tr>
<td>6  ppm Solution</td>
<td>3 ml. With-</td>
<td>8 Liters</td>
</tr>
<tr>
<td>3  ppm Solution</td>
<td>3 ml. With-</td>
<td>16 Liters</td>
</tr>
<tr>
<td>1½ ppm Solution</td>
<td>3 ml. With-</td>
<td>32 Liters</td>
</tr>
</tbody>
</table>
Introduction
Yucca Powder 30 is the spray dried extract of the Mohave Yucca plant, Yucca Schidigera. Concentrated to 30% yucca actives. Yucca Powder 30 is a high quality, easily blended water soluble powder, suitable for dry and spray dried feed applications.

Uses: Poultry livestock and aquaculture feed ingredient

General Use Rates: Poultry and livestock feeds: 80 to 150 g/ton
Aquaculture feeds: 60 to 130 g/ton

Description

<table>
<thead>
<tr>
<th>Appearance</th>
<th>light tan powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>30% Yucca Sarsapogenin Solids (Actives)</td>
</tr>
</tbody>
</table>

Typical Analysis

<table>
<thead>
<tr>
<th>Moisture</th>
<th>&lt; 10%</th>
<th>Carbohydrates: 75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Protein</td>
<td>1%</td>
<td>Ash: 6%</td>
</tr>
<tr>
<td>Crude Fat</td>
<td>2%</td>
<td>Yeast and molds: &lt;10</td>
</tr>
<tr>
<td>Particle Size</td>
<td>98% &lt; 60 mesh</td>
<td>TPC: &lt;10</td>
</tr>
<tr>
<td>Total Actives</td>
<td>30%</td>
<td>Bulk Density: 0.63</td>
</tr>
</tbody>
</table>

Benefits
Yucca Powder 30 is a free flowing, homogenous spray dried powder. By extracting the actives in liquid form and then spray drying, our process delivers consistent levels of biological activity. Our product is designed to meet food industry standards for micro counts, reducing the chance of cross contamination or including a product which has been treated with irradiation.

Yucca Powder 30 is manufactured utilizing breakthrough combustion dryers. This technology allows for consistent particle size and shape, standardized actives every time and low micro counts in the purest yucca powder available.

Yucca Powder 30 Regulatory and Safety Information
Yucca is approved by the FDA under 21 CFR 172.510, FEMA number 3121, CAS# 223749-05-1, EU# 88/388, IFN# 8-19-700.
Aquatrol-B1

Aquatrol-B1 Mycotoxin Binding Premix Concentrate for Aquaculture Feeds

Aquatrol-B1 field studies are showing a high control potential in aquaculture fish feeds, in the control of various aflatoxins, through mycotoxin binding inhibition. Numerous other benefits listed below have also been observed with the use of Aquatrol-B1.

Aquatrol-B1 Is A Natural Organic Alternative

Aquatrol-B1 contains natural highly adsorbent and absorbent montmorillonite, DE-fuller's earth layered silicate mineral clays, special humified vegetable carbons with honey comb like micro-pores structures which help to neutralize the toxic effects of residual mycotoxins endotoxins found in fish feed. Binds a broad range of mycotoxins which allows a safe passage through the digestive tract without absorption.

The ingredients have aggregate forming molecules that act as chelating agents with the ability to mobilize nutrients across various tissue membranes. This can increase the bioavailability of all nutrients and minerals within the fish feed, which are often complexed (tied-tip) by agents such as phytates and phosphates etc.

Aquatrol-B1 also contains mos mannan oligosaccharides (mannose glucomannans - yeast cell wall extracts binders), combined with specific natural botanical plant extracts known for their beneficial effects in fish feeds.

Molds produce mycotoxins (the most well known being aflatoxin and vomitoxin) and while the mold itself is deactivated by heat or other sterilization, the toxins it leaves behind are not. Sensitivity to mycotoxins varies and the exact susceptibility of every fish and crustation is not known, but at some level of fish feed mycotoxin contamination will make them sick and die.

Typical Benefits Of Using Aquatrol-B1

(1) Binding of aflatoxin mycotoxins inhibition control
(2) Helps reduce blood urea nitrogen  B.U.N.
(3) Provides naturally chelated minerals
(4) Normalize acid alkaline balance in gut
(5) Stimulates production of digestive enzymes
(6) Stimulates the growth of beneficial intestinal microflora
(7) Improves feed conversion less fecal output
(8) Lower ammonia and H2S gases (odors) in feces

General inclusion rates: Contact your local distributor

Compatible with high temperature processing via baking/extrusion/pelleting
Packaging - 20 Kg fiber kegs or bulk 1 ton/tote/bags

Samples are available for qualified laboratory evaluation

Reported pathological signs of mycotoxin poisoning in fish include: Aflatoxin: Fish general poor growth, anaemia, impaired blood clotting, sensitivity to bruising, damage to liver and other organs, decreased immune responsiveness, and increased mortality.

Prolonged feeding of a low concentration of aflatoxin (B1) to rainbow trout causes liver tumors (Lovell, 1992). Rainbow trout is reported to be one of the most sensitive animals to aflatoxin poisoning; the LD50 (dose causing death in 50% of the subjects) for aflatoxin in a 50g trout being 500–1000 ppb (0.5–1.0 mg/kg), and oral intakes of 0.4–1.0 ppb dietary AFB1 fed continuously for one year producing hepatic tumors (for review see Hendricks & Bailey, 1989). Signs of severe aflatoxicosis in rainbow trout include liver damage, pale gills and reduced red blood cell concentration.

However, warm water fish such as channel catfish are reported to be less sensitive to aflatoxin; a dietary concentration of 6600 ppb aflatoxin B1 causing reduced growth rate, haematocrit and haemoglobin concentration in channel catfish over a 10-week trial period (Lovell, 1992). Coho salmon (O. kisutch), chinook salmon (O. tschawytsha) and sockeye salmon (O. nerka) are also reported to be considerably less sensitive to aflatoxin poisoning than rainbow trout (Hendricks & Bailey, 1989).

Ochratoxin A: Rainbow trout - severe necrosis of liver and kidney tissue, pale kidney, light swollen livers and death; LD50 of 4.67mg/kg (Hendricks & Bailey, 1989; Lovell, 1992).

Cyclopiazonic acid (CPA): Channel catfish - a dietary level of 100 ppb CPA significantly reducing growth, and 10,000 ppb causing necrosis of gastric glands. According to the above data CPA is more toxic to channel catfish than aflatoxin (Lovell, 1992).

Vomitoxin: Rainbow trout - a dietary level of 1–12.9 ppm causing reduced growth and feed efficiency (Hendricks & Bailey, 1989)

Apart from the mycotoxins, dietary toxicological studies have not been performed on the majority of the other above mentioned contaminants. For general review see NRC (1983), Hendricks & Bailey (1989) and Roberts & Bullock (1989).
Ultra Bio-Logics Inc.

Internet Information

Internet Web Site: www.ublcorp.com   Email: http://www.ublcorp.com/message.html

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