

SHRIMP AND TROPICAL FISH

Shrimp, tilapia, pangasius and other tropical fish commonly suffer from Vibriosis, Bacillary necrosis, Red and White spot diseases and many other bacterial and viral infections as well as parasite diseases. HALAMID® can be used to prevent these diseases provided that it is applied with the correct protocol.

PROTOCOL: PONDS

Stagnant ponds should typically be treated with 3 ppm of HALAMID® once per week.

Tilapia	Hatchery	Nursery	Broodstock
HALAMID® (mg/l)	500	5	20
FREQUENCY	5 min 1x	each 2 days	1x per week
Shrimp	Hatchery	Nursery	Broodstock
HALAMID® (mg/l)	3-5	3-5	3-5
FREQUENCY	Day 1, 3, 5, ...	1x per week	1x per week

PREVENTION RATHER THAN CURE

Most bacterial and parasite diseases (unlike viral diseases) cause mortalities due to high bacterial/ parasitic load. It is not the presence alone of certain pathogens that pose a risk, but their amount. HALAMID® is best used as a preventive strategy, to continually control the amount of pathogens present and safeguard optimal yields. It is also possible to apply a curative treatment with HALAMID® (using normal dosage) to a population burdened by disease. This approach can be considered as a last resort which may result in direct mortality of the most diseased individuals but may also save the crop from even higher losses.

MARINE WATER FISH

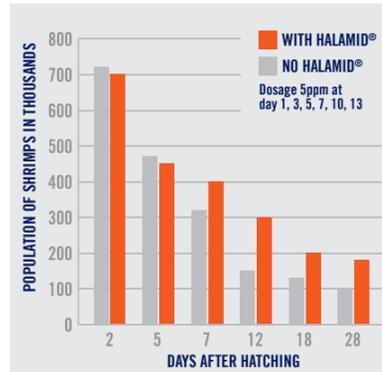
Sea fish like seabass, seabream and cod typically suffer from Vibriosis, Iridoviral disease or parasites. HALAMID® may be used for prevention and treatment against these diseases.

PROTOCOL: CLOSED CIRCUITS/BIOFILTERS

Add max. 15ppm HALAMID® per basin. Treat one basin at a time then flush and move to the second basin. This avoids unnecessary high concentrations of HALAMID® entering the biofilter.

COMPATIBILITY WITH CLOSED RECIRCULATION SYSTEMS

In a study done by Virginia Polytechnic Institute HALAMID® was tested on its compatibility with bio filters. In bio filters Nitrosomonas and Nitrobacter bacteria are used to convert ammonia into nitrates. The study showed that even at a dosage of 20 ppm HALAMID® the nitrate formation (and hence the activity of the bio filter) was maintained indicating that the Nitrosomonas and Nitrobacter bacteria in the bio filter were not affected. We can thus conclude HALAMID® can safely be used in combination with bio filters.



The basin or tank contains live animals and thus special care should be given to avoid local elevated HALAMID® concentrations.

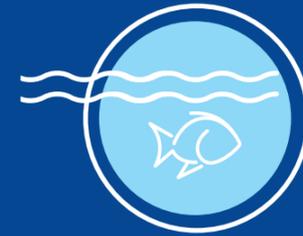
The correct procedure is:

1. Use a clean bucket and fill with water from the tank/basin/pond
2. Dissolve approximately 1/4th of the total calculated amount of HALAMID® to be dosed in the water, by stirring. Check if the solution is clear
3. Add this HALAMID® solution to the basin at a point with turbulence (water entrance/aerator, etc.)
4. Repeat step 1-3 until all HALAMID® has been dissolved and dosed into the basin

Application as surface disinfectant

Application	Concentration
Tank and basin surfaces	1 g/l
Equipment, tools	10 g/l
Transport vehicle	10 g/l
Empty well boats (rinse afterwards)	10 g/l
Foot baths	20 g/l
Processing plant (afterwards)	10 g/l
Artemia	60 mg/l

- ✓ Wet spray
- ✓ Thermal fog
- ✓ Mist
- ✓ Aerial spray



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Never use HALAMID® in combination with other biocides such as formaldehyde. The use of HALAMID® is subject to national registrations which might differ from the general protocols proposed in this brochure.

www.halamid.com

HALAMID®

THE UNIVERSAL DISINFECTANT

by **axcentive**



THE POWERFUL DISINFECTANT FOR AQUACULTURE

- ✓ Recommended against Gill diseases
- ✓ Effective treatment against shrimp pathogens
- ✓ Fish and shrimps are tolerant to HALAMID®
- ✓ For fresh water and marine environments

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HALAMID®

THE UNIVERSAL DISINFECTANT

HALAMID® has been regarded as an essential and reliable product for aquaculture for many years. Its unique formula is designed to be powerful against diseases yet safe for fish, shrimp, and aquatic environments. HALAMID® is used in salt, brackish, and fresh water environments.

BIOSECURITY SOLUTION FOR AQUACULTURE FARMS

PREFERRED BIOCIDES IN WATER TREATMENT

Employed as the biocide of choice in many fish farms, HALAMID®'s biocidal efficacy towards numerous microorganisms allows many farmers to increase biomass. This is why HALAMID® has found such wide application in flow-through raceways, stagnant ponds, closed circuit systems, and open cages. HALAMID® is specifically recommended against Parasitic diseases such as Amoebic Gill Disease (AGD), White spot and Costia as well as bacterial diseases such as vibriosis, Columnaris and Bacterial Gill Disease (BGD).

ALL-ROUND DISINFECTANT

HALAMID® is also frequently used to disinfect empty ponds, tanks, nets, equipment, well boats, and for disinfection in the fish processing industry to ensure that pathogenic microorganisms are rapidly and effectively destroyed.

RESPONSIBLE CHOICE FOR DISINFECTION COMPARED TO OTHER DISINFECTANTS

HALAMID® contributes to several Sustainable Development Goals (SDGs) outlined by the United Nations (<https://sdgs.un.org/goals>). These include clean water, sustainable food production, and the protection of aquatic and land life.

CLEAN WATER & SANITATION



Already at low dosage HALAMID® is an efficient disinfectant for drinking water installations in livestock farms. It keeps the water clear and clean whether it is sourced from wells, ground or city water. HALAMID® contributes to keep the livestock healthy by providing potable water.

RESPONSIBLE CONSUMPTION & PRODUCTION



HALAMID® is an environmentally friendly disinfectant which is less hazardous than traditional disinfectants in production, transportation, and use, minimizing potential environmental contamination. While very effective in killing pathogens, it's safer for workers and less harmful to the animals. Its versatility reduces the need for multiple products, promoting resource efficiency.

LIFE BELOW WATER



Farm disinfectants still often end up in surface water. The environmental effects of these products are therefore important to consider. HALAMID® is readily biodegradable, does not accumulate in riverbeds and is not toxic to the aquatic environment in the concentrations usually found in farm effluents, unlike for example phenolic based disinfectants. Extensive studies have shown that the ecotoxicity of HALAMID® is low.

LIFE ON LAND



HALAMID® is readily biodegradable and will decompose in time whenever remnants of material end up in the environment. As such HALAMID® has low effect on the land life and promotes plant and fauna diversity. HALAMID®'s biodegradability minimizes its impact on land life and promotes biodiversity.

REPLACES DANGEROUS CHEMICALS

In many countries, dangerous chemicals such as permanganate, concentrated chlorine, malachite green, and formaldehyde still find use in fish and shrimp farms. These industrial chemicals pose safety issues to workers who are not trained for handling chemicals and can be lethal to fish.

SAFE IN USE

HALAMID® is the safe alternative for such chemicals. As with any biocide protection measures are required, but HALAMID® can be handled using standard personal protection. Its mild action means that HALAMID® is completely safe and non-toxic for fish and shrimp at effective dosages. HALAMID® does not leave residues in the animals.

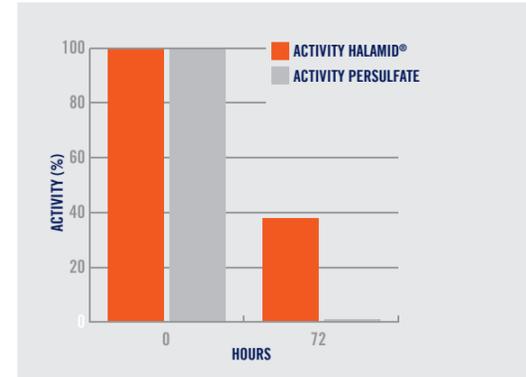
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Axcentive, the producer of HALAMID®, supplies and services HALAMID® worldwide through dedicated distributors. Apart from the aqua industry, Axcentive delivers HALAMID® to poultry farms, pig farms, the dairy industry, pharmaceutical companies, and many other sectors. The production site is ISO 9001 certified. Axcentive holds a US FDA drug registration to treat a number of salmonid-related diseases. HALAMID® is registered under the EU Biocidal Product Regulation.

"The Difference with all other water treatment products is this combination of good efficacy and low toxicity to fish and shrimp." - a major aquaculture distributor -

STABILITY IN SOILED AND SALT WATER

In comparative test, HALAMID® had almost 40% activity left after 3 days in water containing 30g/l of interfering organic matter, while a persulfate ('peroxygen') product had no residual effect. Comparative studies also showed that HALAMID®'s efficacy was only marginally affected by salt water. The standard recommendation of 15 mg/l also applies to treat salt and brackish water fish.



TROUT & OTHER SALMONIDS

HALAMID® is the biocide of choice in the prevention of Gill diseases, Columnaris and many other diseases caused by external bacteria, viruses and parasites when it comes to farming trout, salmon, charrs or graylings.

PROTOCOL: FRESHWATER RACEWAY SYSTEMS

Close the circulation in the basin and add the correct amount of HALAMID® depending on the pH and water hardness (see table as reference). Leave the system closed for 1 hour, then re-install the water flow and let HALAMID® flush away.

- For regular preventive use, add HALAMID® once a week.
- In case of disease symptoms, add HALAMID® 4 times on alternating days, then return to the regular regime.

PROTOCOL: CAGES

Place a tarpaulin around the cage and treat it with HALAMID® depending on the pH and water hardness (see table as reference). Remove the tarpaulin after 1 hour. The remaining HALAMID® will quickly dilute and biodegrade.

The recommended dosage of HALAMID® in cages and raceway systems is dependent on the pH of the rearing water and its hardness. See the table for guidance. It is important to measure the pH and know the water hardness before dosing HALAMID®.

PH	Dosage (G/m³)	
	WH < 50 mg Ca/l	WH > 50 mg Ca/l
6.0	2.5	4
6.5	3	6
7.0	6	8.5
7.5	10	10
8.0	15	15

THE POWERFUL DISINFECTANT FOR AQUACULTURE

