

Aquaculture

PRODUCTS, STUDIES, AND FIELD TESTS



AGROVETERINARY DIVISION

Innovative Technology
at the service of aquaculture

Catalysis, S.L.
Macarena 14
28016 Madrid • SPAIN
www.catalysis.es



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*Sustainable aquaculture
is a safe bet in food production
for the growing world population.*

Josette Decaux
General Manager

At **Catalysis Agroveterinary Division**, we have developed a product for aquaculture that produces significant improvements in the performance of fish farming.

The objective of our research is to discover innovative and sustainable treatments to improve the productivity and health status of animals in cultivation.

The secret of the high effectiveness of our products lies in the biocatalytic process of **MOLECULAR ACTIVATION TECHNOLOGY** developed by Catalysis. By this process, the natural ingredients present in the products increase their biological activity without suffering any alteration in their chemical structure.

Our laboratories are equipped with the most advanced technologies under "Good Handling Practices" and are subject to stricter controls than those the European Union imposes on all manufacturers of agroveterinary products within its borders.

Catalysis, S.L. is a Spanish company with presence in over 80 countries



catalysis

AGROVETERINARY DIVISION

Oxidative stress

damages the cells, causing premature aging and disease



Normal cell



Cell attacked by free radicals



Cell with oxidative stress

Our products are formulated with the benefit of activated molecules.



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MOLECULAR ACTIVATION TECHNOLOGY

1. Increased biological activity
2. Lower concentrations of active ingredients required
3. Synergistic effects of antioxidants
4. Fast action
5. No side effects

Activated antioxidant therapy neutralizes free radicals



MOLECULAR ACTIVATION TECHNOLOGY is essential and necessary to increase biological activity and thus obtain the greatest effectiveness in the treatment of diseases that directly or indirectly produce free radicals.

Aquaculture

VIUSID[®] aqua



Highly effective
to improve productivity of aquaculture

VIUSID® aqua

activated glycyrrhizinic acid,
amino acids, vitamins, and minerals

antioxidant, immunomodulator,
and hepato-pancreatic stimulant

What is it and what does it do?

VIUSID® aqua is a nutritional supplement made up of vitamins, antioxidants, trace elements, and plant extracts.

VIUSID® aqua is designed to allow the maximum expression of genetic potential in aquaculture.

Its hepatoprotective action optimizes productivity.

VIUSID® aqua improves immune defence mechanisms, which makes it especially indicated as a support therapy in preventing and fighting against infectious diseases.

VIUSID® aqua can be used throughout the production cycle in fish farming: in breeders, larvae, fry, and during fattening stage.

- **Improves FCR**
(Feed Conversion Ratio).
- **Powerful hepatoprotector**
a liver more functional with fewer problems.
- **Increases the percentage of survival**
in the different stages of development of the fish and during their handling in the farm.
- **Better assimilation of nutrients**
contained in feed.
- **Better immune defence**
against viruses, bacteria, fungi, parasites, etc.
- **Synergistic action**
with probiotics and health products.
- **More active animals with appetite**
distributed homogeneously in populations.
- **Help to metabolize sex reversal hormones**
and eliminate their residues in fish.



improves productivity
by boosting growth and health
throughout the production cycle

VIUSID® aqua acts on the growth of fish and crustaceans, reinforcing their immune system. It increases appetite and is an excellent antiviral and liver protector.

Its presentation and dosage adapt to all needs and stages of development and there are no side effects.

**Better performance of breeders, increases fertility
and the number of successful crosses**

**VIUSID® aqua creates better life conditions for breeders to
stimulate their fertility**

short cycle
(tilapia)



- **Dosage**
4 ml of **VIUSID® aqua**
per kilogram of feed
for 21 days.

- **7.5 - 10% more fry produced**

shrimp



- **Dosage**
4 ml of **VIUSID® aqua**
per kilogram of feed
for 30-60 days.

- **20% more productive females**
- **30% lower mortality**

long cycle
(seabass/seabream)



- **Dosage**
4 ml of **VIUSID® aqua**
per kilogram of feed
for 30 days.

- **10% increase in larvae**
- **Increased fertility**

High-quality eggs demonstrably rich in vitellus that ensure higher embryo survival and healthy hatchlings

**Reduces the load of pathogenic flora in water,
stress, malformations, and deformations**

Application in larvae and fingerlings

short cycle
(tilapia)



- **Dosage**
4 ml of **VIUSID® aqua**
per kilogram of feed
for 20 days.

- **10% higher survival rate**
- **90% higher final weigh**

shrimp



- **Dosage**
First 10 days, 20 ml
of **VIUSID® aqua** per
m³ of water.
Days 11 to 21, 20 ml
of **VIUSID® aqua** per
kilogram of feed.

- **30% lower mortality**
- **High viability**
- **High survival rate**

long cycle
(seabass/seabream)



- **Dosage**
10ml of **VIUSID® aqua**
per m³ of tank water,
for the first 10 days.

- **Higher survival rate**
- **Better FCR**
- **More uniformity**

Helps in bacterial bioremediation amendment for the control of Vibrio levels

**Improves the health status of animals in culture and shortens
production cycle time to reach market weight**

**VIUSID® aqua increases survival rate and the weight gain
at the end of each stage**

short cycle
(tilapia)



- **Dosage**
1-2 ml of **VIUSID® aqua**
per kilogram of feed
up to harvesting.

- **18.5% higher survival rate**
- **40% FCR improvement**
- **45 days less in soil ponds**
- **21 days less in concrete ponds**
- **Increases uniformity**

shrimp



- **Dosage**
2-3 ml of **VIUSID® aqua**
per kilogram of feed
up to harvesting.

- **29% more biomass**
- **Reduces FCR by 0.2 - 0.4%**
- **Shorter cycle (22 days less)**

long cycle
(seabass/seabream)



- **Dosage**
2 ml of **VIUSID® aqua**
per kilogram of feed
up to harvesting.

- **Lower mortality**
- **Improved FCR**
- **Shorter production cycle**

Better health, better uniformity, and better FCR at harvest

**Reduces mortality and morbidity in bacterial, viral,
and fungal infections**

Protocol for challenge

**VIUSID® aqua boosts the immune system of animals in
culture and has a bacteriostatic and antiviral effects**

short cycle
(tilapia)



- **Dosage**
8 ml of **VIUSID® aqua**
per kilogram of feed.

- **Use continuously during
the outbreak for at least 5-10 days**

- 1) Control water quality.
- 2) In case of disease, minimize the amount of feed quantity and concentrate **VIUSID® aqua** dose.
- 3) Remove sick and dead fish immediately.

shrimp



- **Dosage**
8 ml of **VIUSID® aqua**
per kilogram of feed.

- **8 ml give 93% protection and
4 ml give 86% survival against
viral infections such as WSSV**

- 1) Control water quality.
- 2) In case of disease, minimize the amount of feed quantity and concentrate **VIUSID® aqua** dose.
- 3) Remove sick and dead fish immediately.

long cycle
(seabass/seabream)



- **Dosage**
8 ml of **VIUSID® aqua**
per kilogram of feed.

- **Use continuously during the
outbreak for at least 1 month**

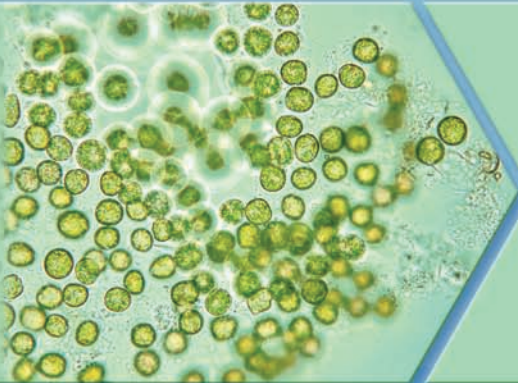
- 1) Control water quality.
- 2) In case of disease, minimize the amount of feed quantity and concentrate **VIUSID® aqua** dose.
- 3) Remove sick and dead fish immediately.

Facilitates recovery in 15 days from lymphocystis cases and the elimination of any toxic residues

Its antiviral effect eliminates bacteria and viruses in live food culture

VIUSID® aqua improves the productive parameters of live food culture and reduces transport stress

microalgae



- Dosage



100 ml of **VIUSID® agro**
per m³ of water.

- **VIUSID® agro** is our product for plant-type cells. It acts as a growth promoter, antioxidant, and cell protector to improve the production of microalgae

artemia and rotifer



- Dosage
50 ml of **VIUSID® aqua**
per m³ of water, once.

- Improves the quality and health status of live food
- Increased percentage of egg in culture of rotifers
- Increased number of rotifers
- Cleaning and better enrichment of artemia for larvae

transportation



- Dosage
40 ml of **VIUSID® aqua**
per 100 litres of tank water, once.

- Clear water
- Remove chlorine and other oxidants
- 1% maximum residual
- Effective for up to 10 hours of transport in one time

Improves water quality in transport and cultivation tanks

Application in shellfish and sea cucumber

shellfish (bivalves)



- **Dosage**
5 ml of **VIUSID® aqua**
for 100 litres of tank
water daily.

- **Increased fertility**
- **Less mortality**
- **Improved survival rates at metamorphosis and settlement**
- **Shorter production cycle**

sea cucumber



- **Dosage**
5 ml of **VIUSID® aqua**
for 100 litres of tank
water daily.

- **Increased fertility**
- **Less mortality**
- **Improved survival rates at metamorphosis and settlement**
- **Shorter production cycle**

***Generates higher levels of antibodies in breeders
and allows their transfer to the progeny***