NUCLEOFORCE
Shrimps LR

Natural Growth
Inner Protection

Optimize the immunity of
SHRIMPS

Bioiberica

NUCLEOFORCE
Shrimps LR

Nucleoforce Shrimps LR™ is a source of concentrated and balanced free **nucleotides** and active precursors obtained from yeast.

The unique composition of **Nucleoforce Shrimps LR™** has been designed to meet precisely and specifically the needs of shrimps larvae in hatcheries and raceways. **Nucleoforce Shrimps LR™** provides the necessary nutrients to optimise the development and maturation of the immune and digestive systems at early stages of development, contributing to a higher future performance.

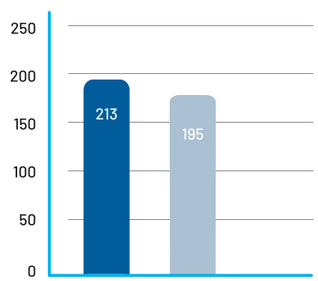
HIGH NUCLEOTIDE CONTENT

Adding **Nucleoforce Shrimps LR™** into the diet supports resistance to disease, stress and nutritional challenges while increasing farm efficiency and productivity. Thanks to its exceptional characteristics, **Nucleoforce Shrimps LR ™** supports resilient intestinal tissue growth in diets with high inclusion levels of plant-origin raw materials, enhancing the digestibility of the diet and thus **supporting intestinal and overall health of the animals**.

MATURATION PERIOD

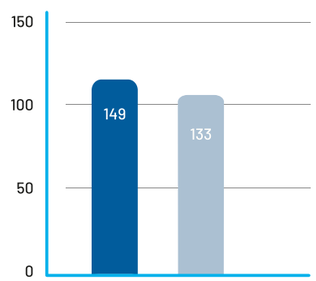
Breeding and maturation of shrimps requires **high-precision nutrition** for **development of high-quality eggs** and sperm to optimise the spawning of the females and the fertilization rate. The use of **Nucleoforce Shrimps LR™** has been proven to significatively enhance the main production parameters of this process such as eggs per female and nauplii per female. This leads to higher figures in total number of viable nauplii and ensures the return of investment in high quality feed materials.

Mean value Eggs/female
(x1.000)



Control
NUCLEOFORCE Shrimps LR

Mean value Nauplii/female
(x1.000)



DOSAGE

- **Maturation. Holding Tanks:** 2g/kg of total dry diet. Feed 0,5% of total biomass per day per tank.
- **Maturation .Maturation Tanks:** 4g/kg of total dry diet. Feed 1,3% of total biomass per day per tank.

LARVAE AND POST LARVAE PHASE

During larvae (nauplii, zoea and mysis) and post larvae development stages, shrimp go through structural changes and have specific nutritional requirements. During the larvae phase, gut cells and enzymes acquire their full functionality and complexity. At this stage **Nucleoforce Shrimps LR™** supports the early evolution of the gut environment to ensure a smooth start of the production cycle.

Dosage: Divide the daily dosage in two applications: one in the morning feed and the other in the evening feed.

Mix on top of the feed using a binding agent. Never dissolve the product directly in the water.

Stage	
Zoea I to Zoea III	0,5g/t of water per day
Mysis I to PLIII	1,0g/t of water per day
PL IV to harvest	2,0g/t of water per day
Raceways	2,0g/t of water per day

Trial Performed at Constamar Hatchery, Ecuador April 2019

Use of Nucleoforce Shrimps LR™ in larval rearing

*Tanks **with** **Nucleoforce Shrimps LR™***

- Good quantity and quality of lipids
- Healthy heapatopancreas
- Gill development in PL7
- Absence of necrosis at the appendage area

*Tanks **without** **Nucleoforce Shrimps LR™***

- Flaccid body
- Weak heapatopancreas
- Necrosis at the pleopods
- Delay in development

Observed increase in survival rate: 10-15%

Nucleoforce Shrimps LR™ **features**:

- Free nucleotides. Full availability at hepatopancreas in free form.
- Keeps biological ratio of purines and pyrimidines of shrimps.
- Good palatability to promote feed intake.
- Promotes digestibility of the whole diet.
- Homogeneity and stability of product composition.
- Biosafe product.

BIOIBERICA

MORE THAN 40 YEARS IMPROVING THE HEALTH AND WELL-BEING OF PEOPLE, ANIMALS AND PLANTS.

Since 1975 we have identified and developed biomolecules of high biological and therapeutic value, which are transformed into high quality **products for the pharmaceutical, nutraceutical, veterinary, food and agricultural industries**.

QS. Quality scheme for food.

Our production model is based on the use of raw materials of animal origin in the most efficient way. We guarantee **full traceability and quality control** throughout the production process. We process the raw material in our 9 state-of-the-art manufacturing facilities, which comply with the most restrictive and up-to-date regulations and standards of good manufacturing practices (GMP/GMP+).

Bioiberica

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