KEMIN
EST. 1961



Aquatria™

Powerful Nutrient Utilization Enhancer

KEMIN AQUASCIENCE

PTP-9582

POWERFUL NUTRIENT ENHANCER FOR AQUAFEED



Aquatria™

Powerful Nutrient Utilization Enhancer

LYSOFORTE® DRY

Original design for enhancing nutrient absorption

We, Kemin AquaScience™ as a dedicated team for aquaculture, have taken our legacy nutritional absorption enhancer, "Lysoforte Dry" to the next level to match Aquafeed requirements.

Presenting Aquatria™, our formula designed for Aquafeed formulation. A synergistic effect of lysophospholipid combined with emulsifier, glycerol, and butyrate is performed in Aquatria™ to enhance nutrient absorption and utilization in the animal body. Aquatria™ provides better emulsification of fat, stabilizes micelle formation, and optimizes the gut environment for better absorption in aquatic animals. At the same time, Aquatria™ also improves the utilization of nutrients by supporting more tri-acyl glycerol formation, enhancing chylomicron formation, improving the utilization of fat, and delivering energy and lipophilic nutrients to aquatic animals. Improving utilization of fat, resulting in a reduction of visceral fat, improved liver health condition, and reduce the use of protein as an energy source which improves fish fillet yield and quality.

On other hand, Kemin AquaScience™ provides solutions that are more sustainable for aquaculture and the environment by adapting to the Best Aquaculture Practices (BAP).

We support responsible soy production as a member of the 'Round Table for Responsible Soy' (RTRS) by purchasing and incorporating RTRS credits into Aquatria™, thus contributing to the United Nations Sustainable Development Goals.

SUSTAINABLE DEVELOPMENT GOALS

RTRS-TMLA-M-IND-00156 www.responsiblesoy.org
Aquatria™ is covered by RTRS credits purchase

RTRS CREDITS
SUPPORTING RESPONSIBLE SOY

Aquatria™

Selective Ingredients from Legacy Formulation

&

Support Sustainable Production of Aquafeed Manufacturing

KEMIN® AQUASCIENCE

FAT DIGESTION AND ABSORPTION PROCESS



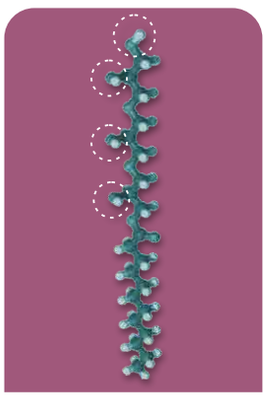
CHALLENGES IN FAT DIGESTION



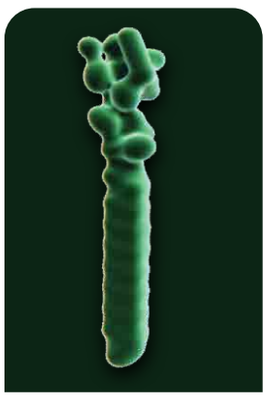
Aquatria™

Powerful Nutrient Utilization Enhancer

Aquatria™ : Synergistic combination of Lysophospholipids, Polyglycerides and Synthetic emulsifier in an ideal HLB ratio for best efficiency in all stages of fat digestion & absorption of nutrients.



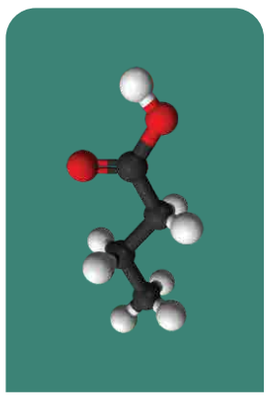
Monoglyceride



Lysophospholipids

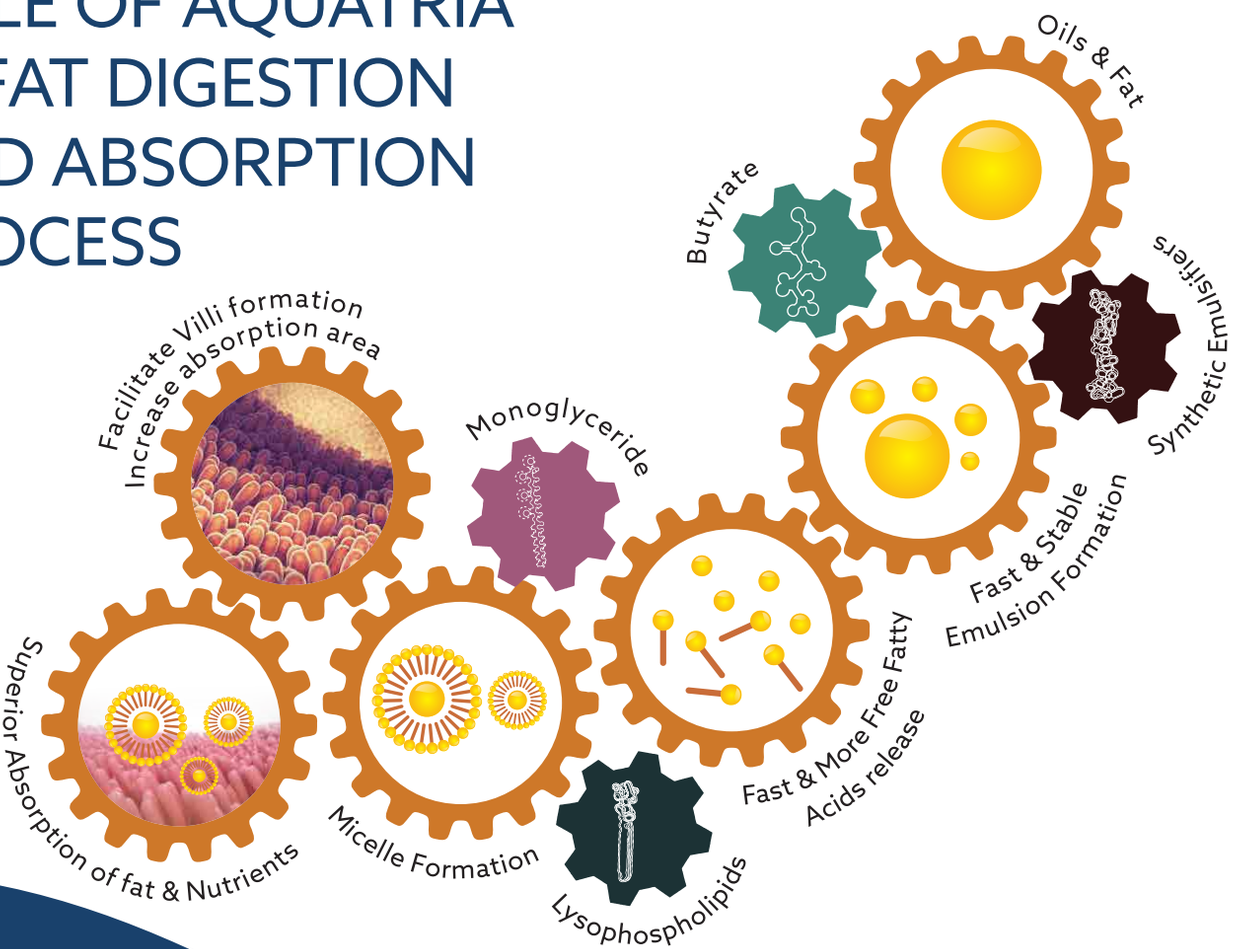


Synthetic Emulsifiers



Butyrate

ROLE OF AQUATRIA™ IN FAT DIGESTION AND ABSORPTION PROCESS



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Powerful Nutrient Utilization Enhancer

Aquatria™ : A Beyond Nutrient Absorption Enhancer with unique and patented combination to enhance nutrient utilization



Improves digestibility & absorption fatty acids and other fat-soluble nutrients (pigments, vitamins), proteins

How does Aquatria™ contribution to Nutrient Utilization

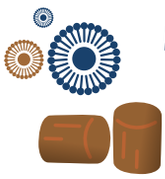


FEATURES

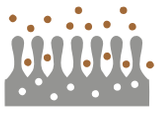
Highly effective Nutrient Utilization Enhancer



Enhances growth performance of aqua species



Improve Utilization of Protein, Fat and Dietary Energy in Aquatic animal body



Facilitates villi formation and optimizes intestinal health



Stable aquatic feed extrusion condition



Reducing Intestinal Inflammation and Improving Liver health condition

BENEFITS



Allows better nutrient utilization



Saves feed cost



Enhances growth performance and reduces FCR

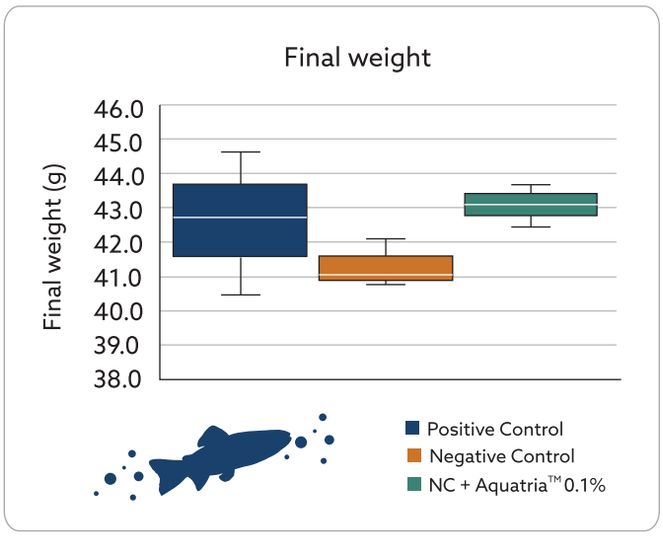
INSTRUCTIONS FOR USE : For Aquatria™ DR

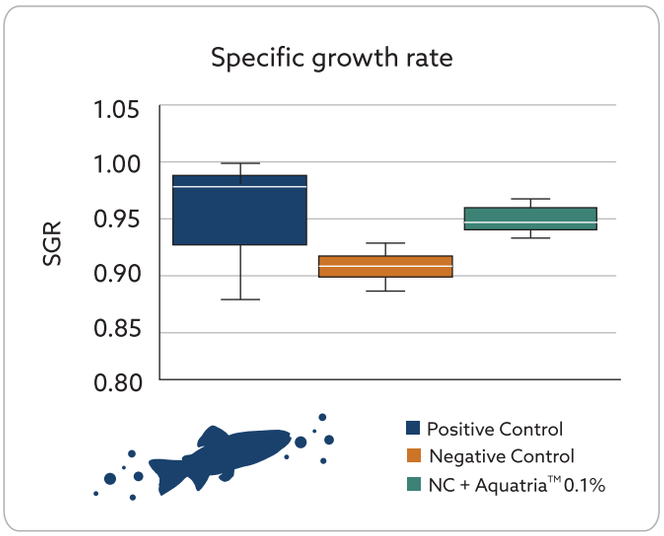
- Tilapia, Catfish, Carp and Omnivorous fish:250 – 500 g/ton of feed
- Salmon, Seabass and other Carnivorous fish: 500 – 1,000 g/ tpm pf feed
- Add the product in mixer to ensure uniform distribution.

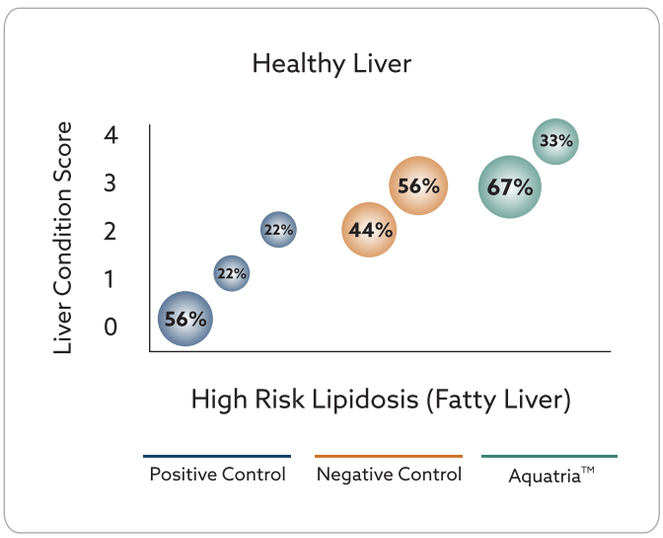


Trial Data Salmon

AQUATRIA™ DR for Salmon, *Salmo salar*
Positive control = Normal diet with total lipid 26.0%
Negative control = Low diet with total lipid 20.5%



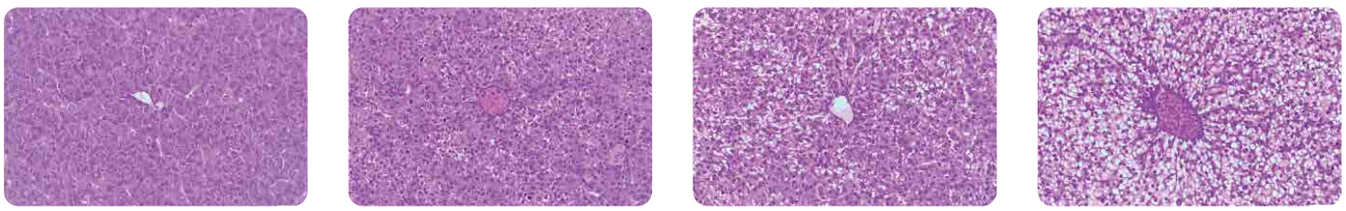




- AQUATRIA DR compensate dietary energy reduction in original diet for 1MJ / kg of feed (equivalent to 239 KCal per kg of feed)
- Improve liver health condition which results in reducing risk of Fatty liver and Lipidosis

- "Under reduction of total energy and lipid in feed formulation,
- Aquatria™ helps to maintain fish performance at similar level to positive control."

Liver condition score



GRADE 4

Healthy Liver
Pack and Dense with Hepatocyte
No vacuole observed

GRADE 3

Moderate Health Liver
Observation of Macro & Microvacuole
Slightly displace of periphery of hepatocyte
25 – 75% of fat degenerate

GRADE 1

GRADE 0

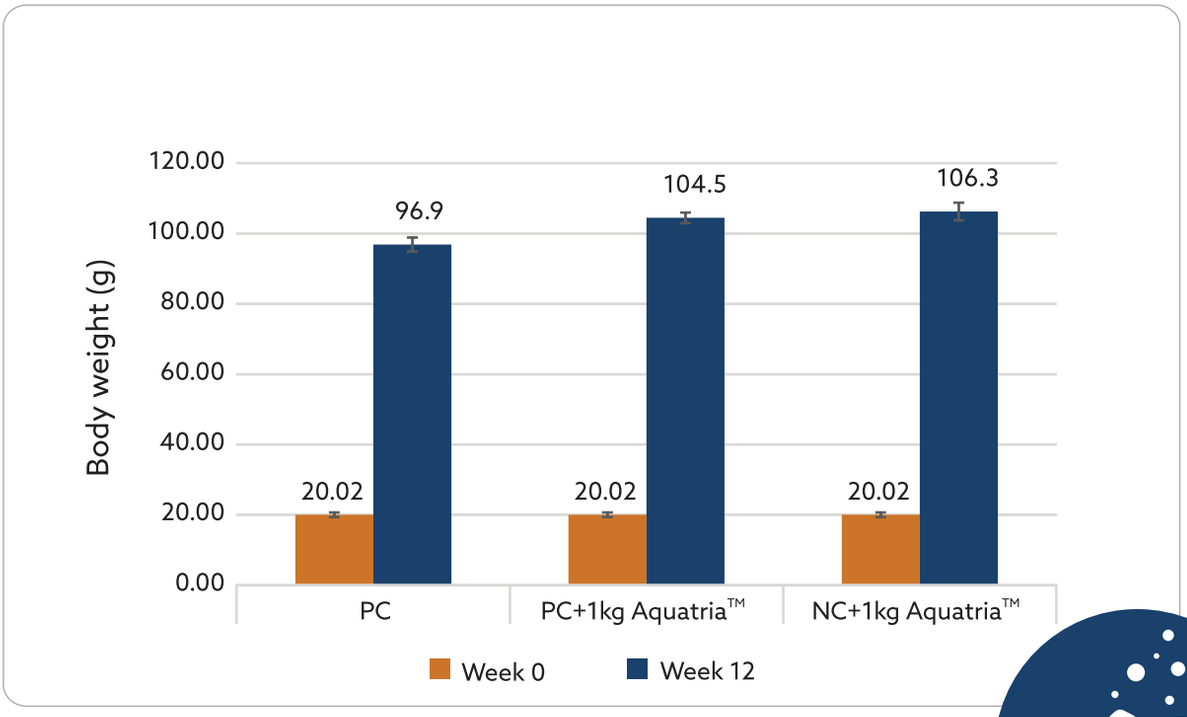
High Risk of Lipidosis
Severe Presence of Macro
& Microvacuole
Loss of structure
75 – 100% of fat degenerate

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3 fish per each of the triplicate tanks sampled per treatment

Aquatria™ in Asian Seabass, Lates calcalifer

Positive control = Normal diet with Protein 46% & total lipid 12%
Negative control = Low diet with Protein 45% & total lipid 11%



PC = Positive Control

NC = Negative control

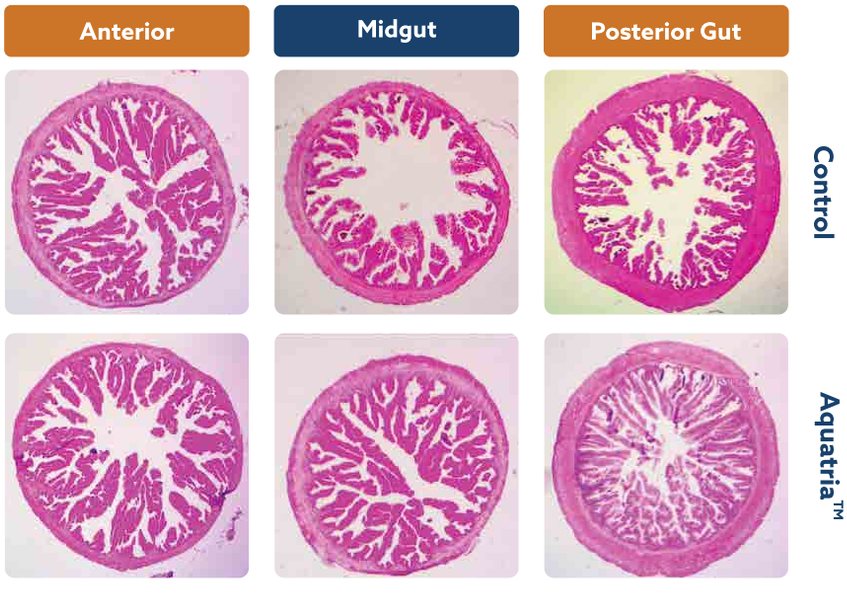
AQUATRIA™ DR compensate dietary energy of 80 KCal / kg of feed and 1% of Protein

Improves intestinal HEALTH

	PC	PC+1Kg AQT
Intestine Wall width	0.27	0.27
Villi length	0.49	0.67
Villi width	0.11	0.11

Aquatria™ promotes villi growth, which ensures intestinal health and nutrient absorption capability of aquatic animals

4 replicates per diet group; N=4 per treatment; n=8 fishes per treatment,



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Please contact your Kemin representative to further discuss the products available in your country or visit **kemin.com/aquascience** to learn more.

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ISO 9001 BUREAU VERITAS Certification

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