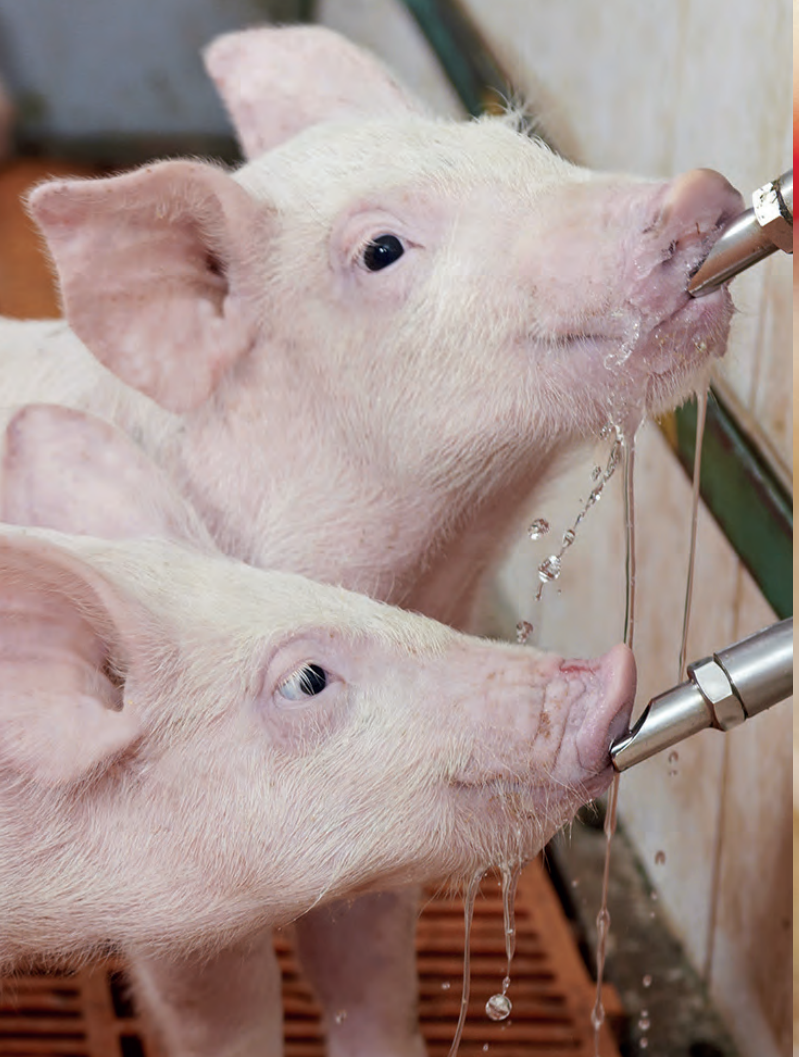
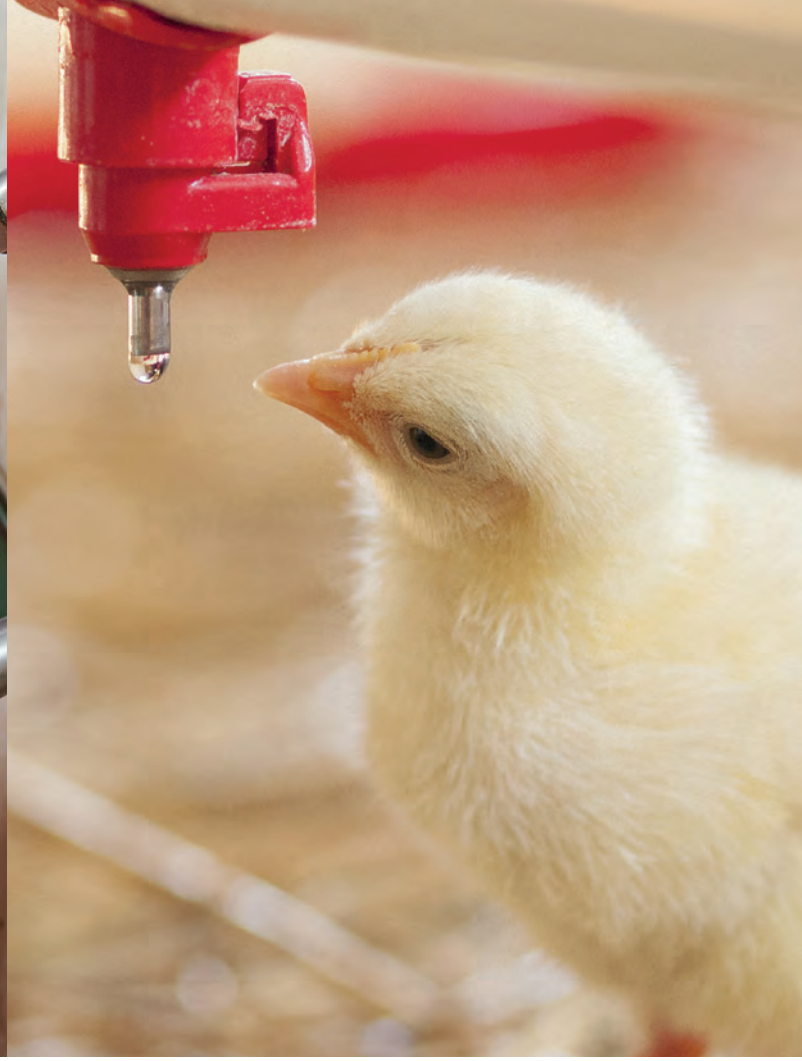




Nutraceutical solutions

Farm application

innovad®
LABORATORIES

Essen
Production & Laboratory

Berchem, Antwerp
Sales & Customer Services

At **Innovad®** we combine people's long time experiences in the field of animal feed and water additives with an innovative approach and dedication to animal well-being and a healthy environment. At the same time we secure cost effectiveness for the producer. We have built a business that embraces openness, shares ideas and opens up innovation in a sustainable and profitable manner.

With our corporate headquarters and licensed state of the art production facilities near to the port of Antwerp in Belgium, we are in a position to serve the global feed and animal industry. Our brands and services are available in over 45 countries.

Fine products are produced with strict adherence to EU directives and regulations, GMP certified and Feed Chain Alliance approved.

innovad®
CREATE TRUST

Farm application

Effective, functionality based solutions designed to maintain and improve animal performance

This line is brought to you by Innovad®
through its dedicated division

specialised in developing solutions for on-farm use
supported by veterinarians.

Innovad® Laboratories is dedicating its time every day to providing animal producers with advanced solutions based on functional ingredients and specific approaches that cater to the needs of the animals in a natural non-medicated way solutions that do not only fix the ongoing health and performance problems, but also contribute to a better result and well-being.

Innovad® Laboratories has integrated its know-how and deep understanding of specific component modes of action into series of solutions designed for on-farm use to address the challenges that producers and veterinarians are confronted with daily.

**All based on natural, harmless components,
seeking synergistic and holistic effects.**

Farm application – Drinking water

Powerful, effective and flexible SOLUTION via drinking water

Farm application – Syringes and gels

Specific individually-dosed nutraceuticals

TABLE OF CONTENT

Farm application – drinking water

Powerful, effective and flexible SOLUTION via drinking water

Stressed animals and animals suffering from diseases will first of all reduce feed intake while maintaining water consumption. Significant reduction in appetite and feed intake has severe consequences on the general condition of the animal. Insufficient nutrient supply in general, and essential nutrient uptake in particular will quickly lead to an impaired overall condition. An irregular supply of nutrients to the intestinal tract will also negatively influence the microflora, intestinal integrity and overall performance of the animal.

However, drinking water offers a perfect medium for the application of supplements to overcome periods of stress, to recover faster from diseases and to limit periods of reduced feed intake to a minimum. Even in case of urgency, there is no need to postpone a treatment because of feed reformulations.

Treatment via drinking water can be started immediately. The application of additives via drinking water is a very practical and straight forward approach in farm management. The product and application can be put into action 100% upon the farmer's observation.

After all, he has the master's eye and is responsible for achieving the best performance and profitability.

A drinking water treatment is a flexible approach in terms of timing and application.

When formulating and developing products, **Innovad®** looked specifically at crucial factors in order to guarantee a convenient and effective solution together with:

- Correct active compound selection
- Optimum stability in a liquid medium
- Synergy, resulting in higher efficiency at a lower cost
- Homogenous distribution in water
- Proper interaction between components, avoiding clogging, crystallization or sedimentation.

Innovad® has developed natural, flexible and easy to apply drinking water treatments to support critical metabolic functions at the right moment in the production cycle.



Water Hygiene

Novicid® ES L	Drinking water sanitation
Novion® S L	Powerful 3-way action on water quality, gut development and antimicrobial effect

Enhance Productivity

Vitalite supplements	Water soluble supplements
Novyrate® EB L	Water soluble esterified butyrins for gut integrity

Natural Solutions

Aflorin® LIVA L	Herbal extracts for liver protection
Aflorin® BF L	Natural concept to combat oxidative stress
Aflorin® P L	Ultimate aid for respiratory problems

Efficient Protection

Novitech® Y L	Immune fortifying solution
Escent® L	Mycotoxin prevention and stress relief
Lumance® L	Intestinal health solution to lower medication

Water Hygiene

Novicid® ES L
Novion® S L

Animals need clean water to grow efficiently and to be free of diseases. Drinking water is often overlooked in determining the hygiene level of the farm. The drinking system needs regular attention to keep it clean and free of pathogens.

Contaminated water is often unnoticeable with the naked eye but performance can be greatly affected by the water quality. Biofilms and mineral deposits may also build in water pipes, which can block and harbour pathogens in the pipe system.

Water is involved in every aspect of the animal's metabolism. It has an important role in body temperature regulation, feed digestion and waste excretion. In a normal situation, farm animals consume twice as much water as feed.
A safe and adequate supply of water is therefore essential in efficient animal production. It would be irresponsible to pay attention to raw materials and feed hygiene programs while neglecting the risk of contamination via drinking water.

Drinking water acidification is an easy and practical approach as part of a total hygiene program on farm.

Turbidity of drinking water is the first indication of contamination.
Based on field observation, only 25% of drinking water samples have sufficient quality to be used for animals.

The use of organic acids as antibacterial components is widely known and the fact that organic acids and their salts are water soluble makes them an ideal farm applications. They will avoid bacterial contamination of drinking water while once in the digestive tract, they will contribute to a healthy microflora and digestive activity. They also prevent the deposition of biofilm in drinking water systems and are complementary to chlorine treatments.

With the aim of increasing the positive impact on the animal, it has been demonstrated that organic acids used in combination with other active ingredients such as essential oils, plant extracts or pre-biotic substances are more effective than the single organic acids.

Water hygiene

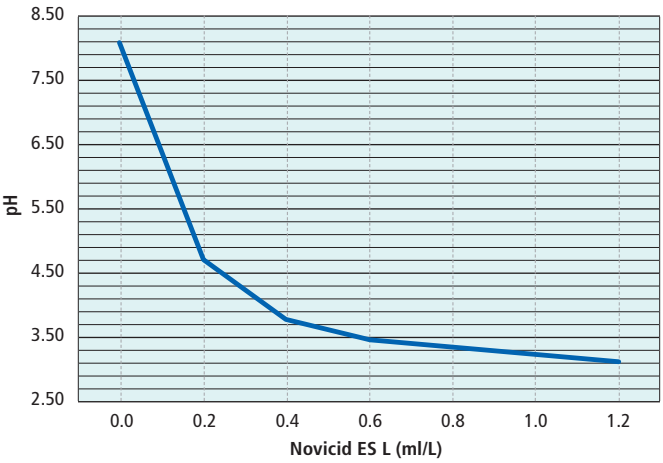
Novicid® ES L

Drinking water sanitation

Novicid® ES L is a well-balanced and highly concentrated mixture of organic and inorganic acids, with antimicrobial activity in drinking water through the reduction of pH. Due to its balanced formulation, it contributes to a quick pH drop of the drinking water, resulting in a strong sanitizing effect and economical application.

Ingredients:
Formic acid and its salts, propionic acid, phosphoric acid, sorbic acid and surfactants.

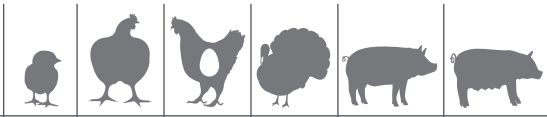
pH reduction by Novicid® ES L

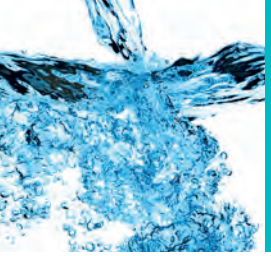


Benefits:

- Efficient pH reduction
- Broad range antibacterial effect
- Improved hygienic quality
- Digestive support
- Balanced intestinal flora
- Liquid feed preservation
- Stimulation of water and feed intake
- Key of on-farm prevention program
- Complementary to chlorination

Dosage and application:

						
Dose (ml/kg BW)	0,23 - 1,38	0,13 - 0,78	0,08 - 0,66	0,07 - 0,81	0,04 - 0,33	0,03 - 0,14
Direction of use	Max concentration 3ml/L of drinking water and pH at minimum 3.8					



innovad LABORATORIES

Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Novicid® ES L

Drinking water sanitation

Scope	Water is involved in every aspect of the animal's metabolism. It has an important role in body temperature regulation, feed digestion and waste excretion. In a normal situation, poultry consume twice as much water as feed. A safe and adequate supply of water is therefore essential in efficient animal production. It would be irresponsible to pay attention to raw materials and feed hygiene programs while neglecting the risk of contamination via drinking water. The use of organic acids as antibacterial components is widely known and the fact that organic acids and their salts are water soluble makes them an ideal Farm Pack. They will avoid bacterial contamination of drinking water, while once in the digestive tract; they will contribute to a healthy microflora and digestive activity. They also prevent the deposition of biofilm in drinking water systems and are complementary to chlorine treatments.
Description	Complementary feed – Nutraceutical solution. A carefully proportioned synergistic mixture of powerful bacteria and mould inhibitors.
Components	Formic acid and its salt, acetic acid, propionic acid, sorbic acid and carrier.
Physical & Technical Specifications	**Physical appearance** : liquid **Colour** : clear to yellowish / brownish **Density** : 1,05 – 1,35 kg/l **pH (10%)** : 2,5 – 3,4 **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: Drinking water: 0,5 – 3,0 ml/l. Max. concentration of 3 ml/l of drinking water and pH of min. 4. Application in feed: 0,5 – 3 kg/T.

Broiler (ml/kg BW)	Broilers starter	:	0,23 – 1,38
	Broilers grower/finisher	:	0,13 - 0,78
Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	:	0,11 – 0,66
	Pre-Lay (14-18 weeks)	:	0,08 - 0,45
	Layer (>18 weeks)	:	0,09 - 0,51
Turkey (ml/kg BW)	Week 1-4	:	0,14 – 0,81
	>4 weeks	:	0,07-0,39
Pig (ml/kg BW)	< 6 weeks after weaning	:	0,06 – 0,33
	> 6 weeks after weaning	:	0,04 - 0,21
Sow (ml/kg BW)		:	0,03-0,14

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10078**

Water hygiene

Novion® S L

Powerful 3-way action on water quality, gut development and antimicrobial effect

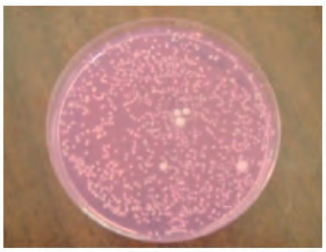
A three way action farm application with the following features:

1. **Enteric development**
2. **Water sanitation and antibacterial**
3. **Change of microflora community in the gut for a better balanced flora**

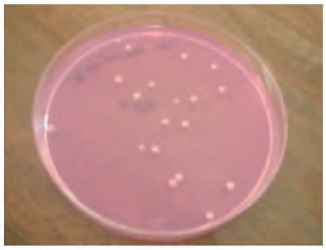
Novion® S L is a proprietary formulation that combines organic acid with butyric acid, benzoic acid, MCFA and phytochemicals. Emulsifiers and high speed mixers homogenize it to an easily water soluble complex, making it very effective on farm and addressing various bacterial challenges and related disorders.

Users try to keep it in the water as much as possible, not necessarily waiting for special occasions. We have received outstanding in vivo response and feedback from a number of users.

Novion® S L is safe, natural and good for the animal's health.

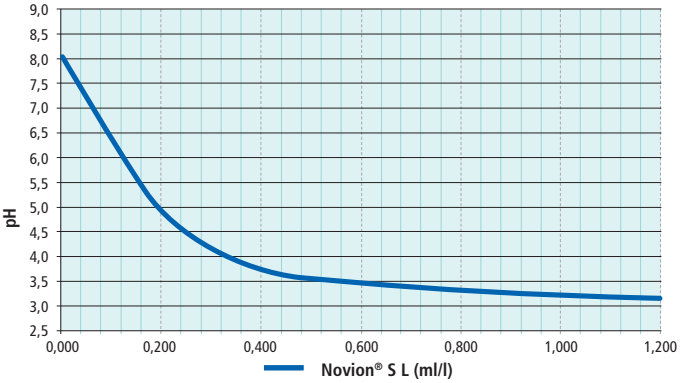


Without Novion® S L – Total bacterial count of 3 200 000 CFU/g



With Novion® S L – Total bacterial count of 1 400 CFU/g

pH reduction by Novion® S L



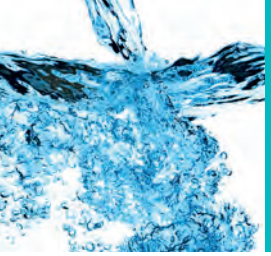
Benefits:

- Control of disease challenge (bacteria and viruses)
- Low inclusion level
- Strong pH reduction and sanitation of the water
- Effective antibacterial barrier at stomach level
- Supply of highly available energy source to build and maintain intestinal integrity
- Well tested effective botanical components and fatty acids to enlarge the antibacterial scope over the entire digestive tract
- Avoids biofilm deposition
- Enhances palatability and feed safety of liquid feed for farm animals

Dosage and application:

- Application in liquid feed. 2-3 L/MT of dry feed.
- Add in liquid feed to reduce pH to 4,5 - 5.

Dose (ml/kg BW)		
0,14 - 0,23	0,09 - 0,13	0,05 - 0,11
0,04 - 0,14	0,03 - 0,6	0,01 - 0,03
Direction of use		
Max concentration 1,5ml/L of drinking water and pH at minimum 4.0		



innovad LABORATORIES

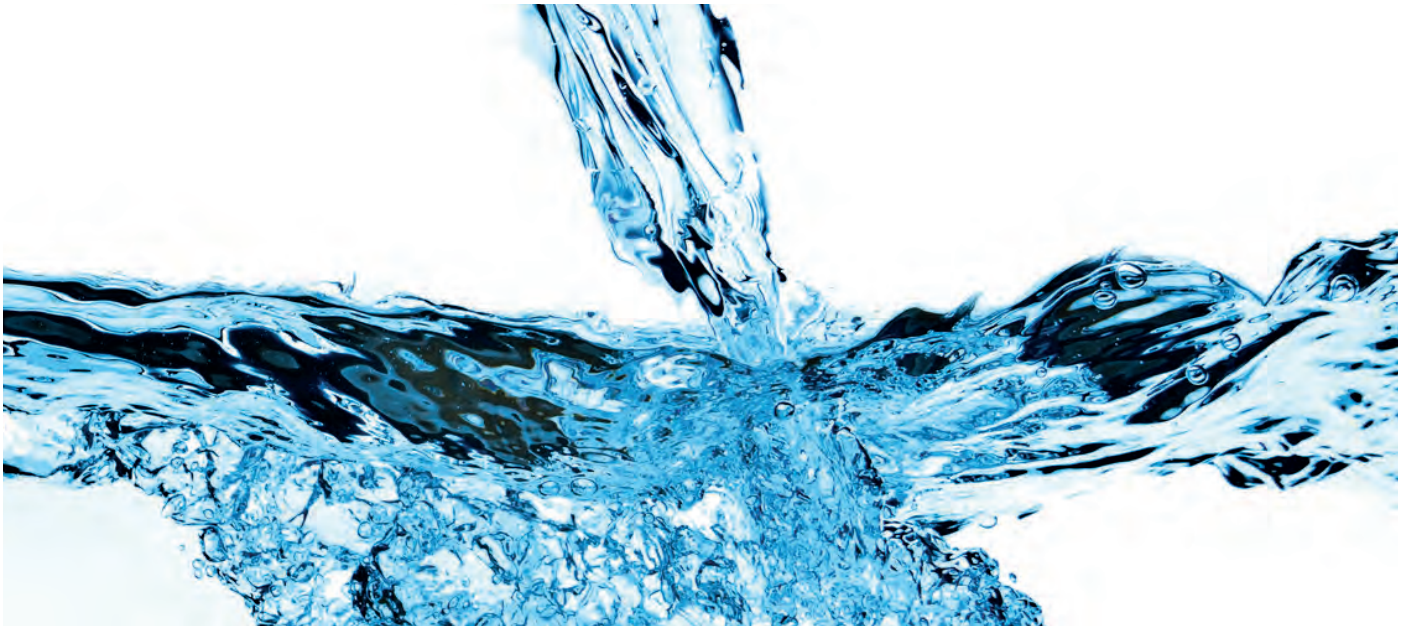
Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

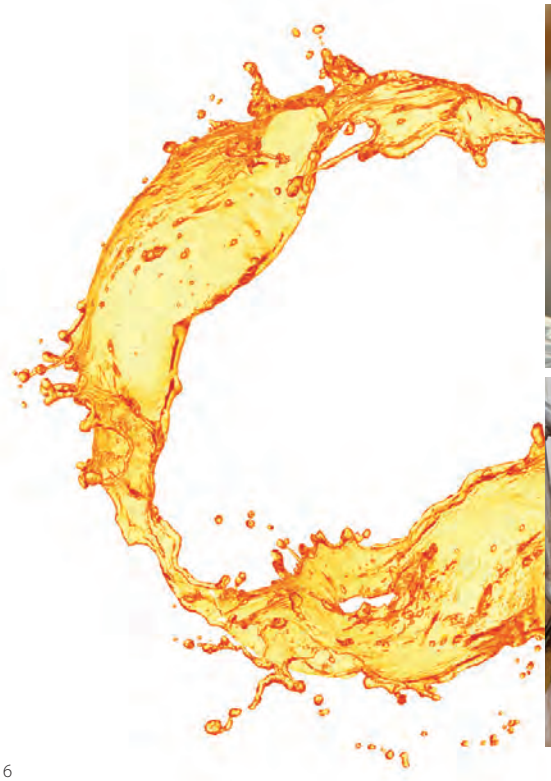
Novion® S L

Powerful 3-way action for water quality, gut development and antimicrobial effect

Scope	Water is involved in every aspect of the animal's metabolism. It has an important role in body temperature regulation, feed digestion and waste excretion. In a normal situation, poultry consume twice as much water as feed. A safe and adequate supply of water is therefore essential in efficient animal production. It would be irresponsible to pay attention to raw materials and feed hygiene programs while neglecting the risk of contamination via drinking water. The use of organic acids as antibacterial components is widely known and the fact that organic acids and their salts are water soluble makes them an ideal Farm Pack. They will avoid bacterial contamination of drinking water, while once in the digestive tract; they will contribute to a healthy microflora and digestive activity. The addition of bio-active butyrate completes the mode of action, including intestinal integrity and cell proliferation.
Description	Complementary feed – Nutraceutical solution. A highly concentrated stable mixture of organic acids, medium chain fatty acids, plant derivatives.
Components	Propionic acid, formic acid, lactic acid, butyric acid, flavouring substance, medium chain fatty acids, essential oils, propylene glycol.
Physical & Technical Specifications	**Physical appearance** : liquid **Colour** : brown to dark brown **Density** : 1,14 – 1,24 kg/l **pH (10%)** : 2,5 – 3,5 **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,3 – 0,5 ml/L of drinking water. Max. concentration of 1,5 ml/l of drinking water and pH of min. 4. Application in feed: 2 – 5 kg/T. **Broiler (ml/kg BW)**: Broilers starter : 0,14 - 0,23; Broilers grower/finisher : 0,09 - 0,13 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,07 – 0,11; Pre-Lay (14-18 weeks) : 0,05 - 0,08; Layer (>18 weeks) : 0,05 - 0,08 **Turkey (ml/kg BW)**: Week 1-4 : 0,08 – 0,14; >4 weeks : 0,04 - 0,07 **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,03 – 0,06; > 6 weeks after weaning : 0,02 - 0,04 **Sow (ml/kg BW)** : 0,01 - 0,03
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1,0 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10243**



Enhance productivity



Vitalite supplements

Water soluble supplements

There are several factors that influence nutrient requirements and utilization in animals. These include physiological state and production function, stress, disease and changes in environmental conditions, vitamin antagonists, use of antimicrobial drugs and body vitamin reserves. Under commercial pig and poultry production conditions, nutrient allocations that are higher than those recommended by nutritional institutions are needed during peak performance. Poultry, swine and other monogastric animals are dependent on the dietary source of vitamins and micronutrients. More commonly, animals can be sub-clinically deficient where outward signs are not obvious but production is compromized. Loss in productive opportunity is harder to diagnose than clinical deficiencies.

Vitalite is a water soluble supplement that is formulated to provide the needed vitamins, minerals, amino acids and micronutrients for optimum performance. The unique combinations of these nutrients ensure efficient production.

Vitalite helps animals recover from diseases and stress. It encourages feed and water intake which gives a nutritional boost for better health and performance.

Vitalite product range

- **Supplements nutrients that optimize productivity**
- **Fast recovery during disease and stressful condition**
- **Improves liver function**
- **Heat stress relief and energy boost**

Vitalite ADE

Vitalite E+Se

Vitalite Plus

Vitalite S

Tracelite Ions

Vitalite Tonic

Vitalite Plus LM

Enhance productivity

Vitalite supplements

Water soluble supplements

Vitalite supplement means choosing quality. Each day Innovad® Laboratories focuses on refining a nutritional concept that enables the producer to achieve optimal performance. No matter which feed you use, it opens the way to optimal production and maintains the health of your animal. We keep an eye on actual practice at all times not only on the farm, but the ingredients we process are also subjected to very thorough inspection.

Vitalite ADE

Vitalite ADE is a combination of fat soluble vitamins that are easily absorbable with very easy application in drinking water. **Vitalite ADE** is recommended for **minimizing the effects of stress** during vaccination, moving/transport and abrupt changes in weather conditions.
Vitamin A is needed for growth and development, supported by Vitamin D for proper bone formation. Vitamin E also gives extra stamina for fast growing animals. It also prevents cell damage in muscles, heart, testes, liver and nerves.

Vitalite ADE combines solubility and absorbability to deliver the needed vitamins for your animals. It is also recommended for fast growing and highly productive animals.

Vitalite E+Se

Vitalite E+Se is a duo vitamin for **immune boost** that reduces the damage of infections. Selenium increases the immune response. Higher selenium in blood increases the killing ability of the immune system against pathogens and is therefore better able to resist diseases. The added Vitamin E as tandem vitamin reduces the oxidative damage during this killing response of the immune system. **Vitalite E+Se** is a good combination of antioxidant and immune action to revitalize the animal before and after infection or vaccination.

Vitalite E+Se for foreseen vaccination program and disease challenge in the area.

Vitalite S / Vitalite Plus LM

Vitalite Plus provides **optimum protein** nutrition for farm animals with minimum ammonia production. Amino acid in water gives an easy source of limiting amino acids for productive animals. It also maintains the size of eggs at the peak of production in layers.

Vitalite S / Vitalite Plus LM is a balanced mixture of amino acids and vitamins that has a sparing effect on essential amino acids. These amino acids will be used for growth and production.

This also reduces ammonia production inside the gut and further improves health and performance.

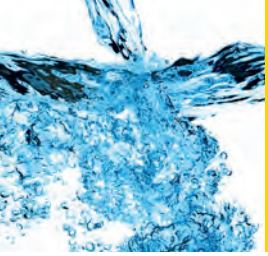
Vitalite Plus / Vitalite Plus LM

A superior way to **correct growth lag** and production drop. The lag or drop in production can be due to stress or a bottle neck in nutrition. In order to continually achieve the desired result and optimum genetic potential of the animal, **Vitalite S/Vitalite Plus LM** can easily be given to animals to attain better results.

Vitalite Plus / Vitalite Plus LM balances the limiting factor of nutrition by supplementing amino acids, vitamins and micronutrients in order to continually grow and produce.

Tracelite Ions

Tracelite Ions is an **oral rehydrating** formula fortified with vitamins, energy and electrolytes for maximum absorption and retention of water. It replaces the lost fluids and electrolytes during hot weather conditions, wet litter, diarrhea and vomiting. It prevents shock and mortality due to electrolyte imbalance. Vitamins and minerals are added to strengthen the animals and to recover from low intake.



Tracelite Ions helps the animals to maintain their physiological pH, facilitates nutrient exchange mechanism. It also optimizes energy utilization of animals during challenging situations such as diarrhea, heat stress, weaning, wet droppings and during transport.

Tracelite Ions is a perfect combination of electrolytes, vitamins and energy for optimum performance!

Vitalite Tonic

Vitalite Tonic is a **liver protection** and liver boosting solution. The liver is a multi-tasking organ involved in metabolism, storage, secretion and detoxification. As the central organ for bioprocessing, keeping the liver at its top productive capacity also means optimum performance.

Vitalite Tonic is a practical and through-drinking-water approach that supports the liver in its highly demanding task.

Dosage and application:

Dose (ml/kg BW)						
Vitalite ADE	0,12	0,23-0,46	0,02-0,06	0,02-0,07	0,01-0,03	0,01
Vitalite E+Se	0,46	0,26	0.15-0.22	0.13-0.27	0,07-0.11	0,05
Vitalite Plus	0,23-0,46	0,13-0,26	0,08-0,22	0.07-0.27	0,04-0,11	0,03-0,05
Vitalite S Vitalite Plus LM	0,23-0,46	0,13-0,26	0,08-0,22	0,08-0,22	0,04-0,11	0,03-0,05
Tracelite Ions	0,23-0,46	0,13-0,26	0,08-0,22	0,08-0,27	0,04-0,11	0,03-0,05
Vitalite Tonic	0,23-0,46	0,13-0,26	0,08-0,22	0,08-0,27	0,04-0,11	0,03-0,05
Direction of use: 5-6 days, repeat after 7 days if needed.						

Vitalite supplements

Water soluble supplements

innovad LABORATORIES

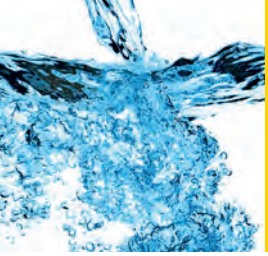
Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite ADE

Readily available nutritional supplements

Scope	High performing animals, reared under intensive production conditions, are susceptible to several diseases. Feed intake will be affected at first by Pathogenic challenges and environmental stress. As a result, animals become weaker due to the lack of nutrients which are needed for proper immune response and maintenance. But even if animals are inappetent, they maintain water intake. Drinking water can be a medium to provide support which is needed for nutritional stability and recovery. Vitamins, minerals and other micronutrients are of great importance for health and productivity of animals. Supplementation through drinking water is recommended to reduce the risk of nutritional imbalance at specific stages of life cycle.
Description	Dietetic complementary feed – Nutraceutical solution. Supplementary vitamins and micronutrients for drinking water.
Components	Mixture of vitamins A, D3 and E.
Physical & Technical Specifications	**Physical appearance** : liquid **Vitamin E** : 20.000 mg/l **Vitamin A** : 100.000.000 I.U./l **Vitamin D3** : 20.000.000 I.U./l **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,125 – 0,25 ml/l of drinking water. During 3 – 5 days. Repeat after 7 days if needed. **Broiler (ml/kg BW)**: Broilers starter : 0,12; Broilers grower/finisher : 0,03 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,03 – 0,06; Pre-Lay (14-18 weeks) : 0,02; Layer (>18 weeks) : 0,02; *Application: 3-5 days, repeat after 7 days if needed.* **Turkey (ml/kg BW)**: Week 1-4 : 0,03 – 0,07; >4 weeks : 0,02; *Application: 3-5 days, repeat after 7 days if needed.* **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,01 – 0,03; > 6 weeks after weaning : 0,01; *Application: 3-5 days, repeat after 7 days if needed.* **Sow (ml/kg BW)** : 0,01
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10513**



innovad LABORATORIES

Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite E+Se

Readily available nutritional supplements

Scope	High performing animals, reared under intensive production conditions, are susceptible to several diseases. Feed intake will be affected at first by Pathogenic challenges and environmental stress. As a result, animals become weaker due to the lack of nutrients which are needed for proper immune response and maintenance. But even if animals are inappetent, they maintain water intake. Drinking water can be a medium to provide support which is needed for nutritional stability and recovery. Vitamins, minerals and other micronutrients are of great importance for health and productivity of animals. Supplementation through drinking water is recommended to reduce the risk of nutritional imbalance at specific stages of life cycle.
Description	Dietetic complementary feed – Nutraceutical solution. Supplementary vitamins and micronutrients for drinking water.
Components	Antioxidant mixture of vitamin E and selenium.
Physical & Technical Specifications	**Physical appearance** : liquid **Vitamin E** : 100.000 mg/l **Selenium (Sodium selenite)** : 500 mg/l **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 1 ml/l of drinking water. During 3 – 5 days. Repeat after 7 days if needed. **Broiler (ml/kg BW)**: Broilers starter : 0,46; Broilers grower/finisher : 0,26 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,22; Pre-Lay (14-18 weeks) : 0,15; Layer (>18 weeks) : 0,17 **Turkey (ml/kg BW)**: Week 1-4 : 0,27; >4 weeks : 0,13 **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,11; > 6 weeks after weaning : 0,07 **Sow (ml/kg BW)** : 0,05
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10514**

Vitalite supplements

Water soluble supplements

innovad LABORATORIES

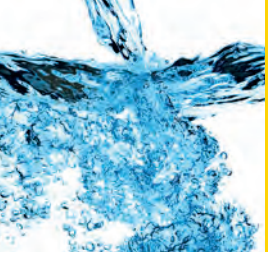
Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite Plus

Readily available nutritional supplements

Scope	High performing animals, reared under intensive production conditions, are susceptible to several diseases. Feed intake will be affected at first by Pathogenic challenges and environmental stress. As a result, animals become weaker due to the lack of nutrients which are needed for proper immune response and maintenance. But even if animals are inappetent, they maintain water intake. Drinking water can be a medium to provide support which is needed for nutritional stability and recovery. Vitamins, minerals and other micronutrients are of great importance for health and productivity of animals. Supplementation through drinking water is recommended to reduce the risk of nutritional imbalance at specific stages of life cycle.
Description	Complementary feed – Nutraceutical solution. Supplementary vitamins and micronutrients for drinking water.
Components	Mixture of vitamins, choline chloride and amino acids.
Physical & Technical Specifications	**Physical appearance** : liquid **Vitamin B1** : 5.000 mg/l **Vitamin B2** : 2.000 mg/l **Vitamin B5** : 11.000 mg/l **Vitamin B6** : 2.000 mg/l **Vitamin B12** : 10 mg/l **Vitamin PP** : 60.000 mg/l **Vitamin K3** : 650 mg/l **Choline chloride** : 50.000 mg/l **DL-Methionine** : 50.000 mg/l **Folic acid** : 300 mg/l **Sorbitol** : 200 mg/l **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,5 – 1 ml/l of drinking water. During 3 – 5 days. Repeat after 7 days if needed. **Broiler (ml/kg BW)**: Broilers starter : 0,23 - 0,46; Broilers grower/finisher : 0,13 - 0,26 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,11 - 0,22; Pre-Lay (14-18 weeks) : 0,08 - 0,15; Layer (>18 weeks) : 0,09 - 0,17 **Turkey (ml/kg BW)**: Week 1-4 : 0,14 - 0,27; >4 weeks : 0,07 - 0,13 **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,06 - 0,11; > 6 weeks after weaning : 0,04 - 0,07 **Sow (ml/kg BW)** : 0,03 - 0,05
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10517**



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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite Plus LM

Readily available nutritional supplements

Scope	High performing animals, reared under intensive production conditions, are susceptible to several diseases. Feed intake will be affected at first by Pathogenic challenges and environmental stress. As a result, animals become weaker due to the lack of nutrients which are needed for proper immune response and maintenance. But even if animals are inappetent, they maintain water intake. Drinking water can be a medium to provide support which is needed for nutritional stability and recovery. Vitamins, minerals and other micronutrients are of great importance for health and productivity of animals. Supplementation through drinking water is recommended to reduce the risk of nutritional imbalance at specific stages of life cycle.
Description	Dietetic complementary feed – Nutraceutical solution. Supplementary vitamins and micronutrients for drinking water.
Components	Mixture of vitamins, choline chloride, amino acids and carrier.

Physical & Technical Specifications

Physical appearance	:	liquid	**Vitamin B5**	:	3.000 mg/l
Colour	:	clear orange	**Vitamin B6**	:	1.250 mg/l
Vitamin A	:	25.000.000 I.U./l	**Vitamin B12**	:	8 mg/l
Vitamin D3	:	200.000 I.U./l	**Vitamin H / Biotin**	:	15 mg/l
Vitamin PP	:	14.000 mg/l	**Choline chloride**	:	100.000 mg/l
Vitamin E	:	10.000 mg/l	**L-Lysine**	:	12.800 mg/l
Vitamin B1	:	1.250 mg/l	**DL-Methionine**	:	10.400 mg/l
Vitamin B2	:	2.000 mg/l			

Colour change or variation does not affect performance.

Application & Dosage

Indicative dosage and Application	0,5 – 1 ml/l of drinking water. During 3 – 5 days. Repeat after 7 days if needed.		
Broiler (ml/kg BW)	Broilers starter	:	0,23 - 0,46
	Broilers grower/finisher	:	0,13 - 0,26
Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	:	0,11 - 0,22
	Pre-Lay (14-18 weeks)	:	0,08 - 0,15
	Layer (>18 weeks)	:	0,09 - 0,17
Turkey (ml/kg BW)	Week 1-4	:	0,11 - 0,22
	>4 weeks	:	0,08 - 0,15
Pig (ml/kg BW)	< 6 weeks after weaning	:	0,06 - 0,11
	> 6 weeks after weaning	:	0,04 - 0,07
Sow (ml/kg BW)		:	0,03 - 0,05

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10039**

Vitalite supplements

Water soluble supplements

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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite S

Scope	High performing animals, reared under intensive production conditions, are susceptible to several diseases. Feed intake will be affected at first by Pathogenic challenges and environmental stress. As a result, animals become weaker due to the lack of nutrients which are needed for proper immune response and maintenance. But even if animals are inappetent, they maintain water intake. Drinking water can be a medium to provide support which is needed for nutritional stability and recovery. Vitamins, minerals and other micronutrients are of great importance for health and productivity of animals. Supplementation through drinking water is recommended to reduce the risk of nutritional imbalance at specific stages of life cycle.
Description	Dietetic complementary feed – Nutraceutical solution. Supplementary vitamins and micronutrients for drinking water.
Components	Mixture of vitamins, amino acids and carrier.

Physical & Technical Specifications

Physical appearance	:	liquid	**Vitamin E Acetate**	:	7.500 mg/l
Vitamin A	:	15.000.000 I.U./l	**Vitamin B1**	:	1.000 mg/l
Vitamin D3	:	3.750.000 I.U./l	**Vitamin B2**	:	1.000 mg/l
Vitamin K3	:	2.250 mg/l	**Vitamin B5**	:	1.500 mg/l
Vitamin PP (Nicotinamide)	:	15.000 mg/l	**Vitamin B6**	:	1.500 mg/l
Crude protein	:	35.000 mg/l	**Vitamin B12**	:	15 mg/l

Approximate amino acid profile :

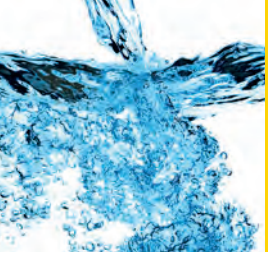
Glutaminc acid	:	2.800 mg/l	Serine	:	750 mg/l
Aspartic acid	:	1.600 mg/l	Threonine	:	700 mg/l
Alanine	:	1.500 mg/l	Proline	:	680 mg/l
Leucine	:	1.300 mg/l	Phenylalanine	:	600 mg/l
Valine	:	1.000 mg/l	Tyrosine	:	400 mg/l
Isoleucine	:	905 mg/l	Histidine	:	350 mg/l
Arginine	:	850 mg/l	Tryptophan	:	200 mg/l
Glycine	:	800 mg/l	Cystine	:	150 mg/l

Colour change or variation does not affect performance.

Application & Dosage

Indicative dosage and Application	0,5 – 1 ml/l of drinking water. During 3 – 5 days. Repeat after 7 days if needed.		
Broiler (ml/kg BW)	Broilers starter	:	0,23 - 0,46
	Broilers grower/finisher	:	0,13 - 0,26
Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	:	0,11 - 0,22
	Pre-Lay (14-18 weeks)	:	0,08 - 0,15
	Layer (>18 weeks)	:	0,09 - 0,17
Turkey (ml/kg BW)	Week 1-4	:	0,11 - 0,22
	>4 weeks	:	0,08 - 0,15
Pig (ml/kg BW)	< 6 weeks after weaning	:	0,06 - 0,11
	> 6 weeks after weaning	:	0,04 - 0,07
Sow (ml/kg BW)		:	0,03 - 0,05

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10311**



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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Tracelite Ions

Readily available nutritional supplements

Scope	High performing animals, reared under intensive production conditions, are susceptible to several diseases. Feed intake will be affected at first by Pathogenic challenges and environmental stress. As a result, animals become weaker due to the lack of nutrients which are needed for proper immune response and maintenance. But even if animals are inappetent, they maintain water intake. Drinking water can be a medium to provide support which is needed for nutritional stability and recovery. Vitamins, minerals and other micronutrients are of great importance for health and productivity of animals. Supplementation through drinking water is recommended to reduce the risk of nutritional imbalance at specific stages of life cycle.
Description	Complementary feed – Nutraceutical solution. Supplementary vitamins and micronutrients for drinking water.
Components	Mixture of vitamins and minerals for drinking water application.
Physical & Technical Specifications	**Physical appearance** : liquid **Vitamin B5** : 140 mg/l **Vitamin B1** : 40 mg/l — **Na** : 2.420 mg/l **Vitamin B6** : 100 mg/l — **K** : 3.690 mg/l **Vitamin C** : 1.400 mg/l — **Cl** : 4.430 mg/l **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,5 – 1 ml/l of drinking water. During 5 – 6 days. Repeat after 7 days if needed. **Broiler (ml/kg BW)**: Broilers starter : 0,23 - 0,46; Broilers grower/finisher : 0,13 - 0,26 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,11 - 0,22; Pre-Lay (14-18 weeks) : 0,08 - 0,15; Layer (>18 weeks) : 0,09 - 0,17 **Turkey (ml/kg BW)**: Week 1-4 : 0,14 - 0,27; >4 weeks : 0,07 - 0,13 **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,06 - 0,11; > 6 weeks after weaning : 0,04 - 0,07 **Sow (ml/kg BW)** : 0,03 - 0,05
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10516**

Vitalite supplements

Water soluble supplements

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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite Tonic

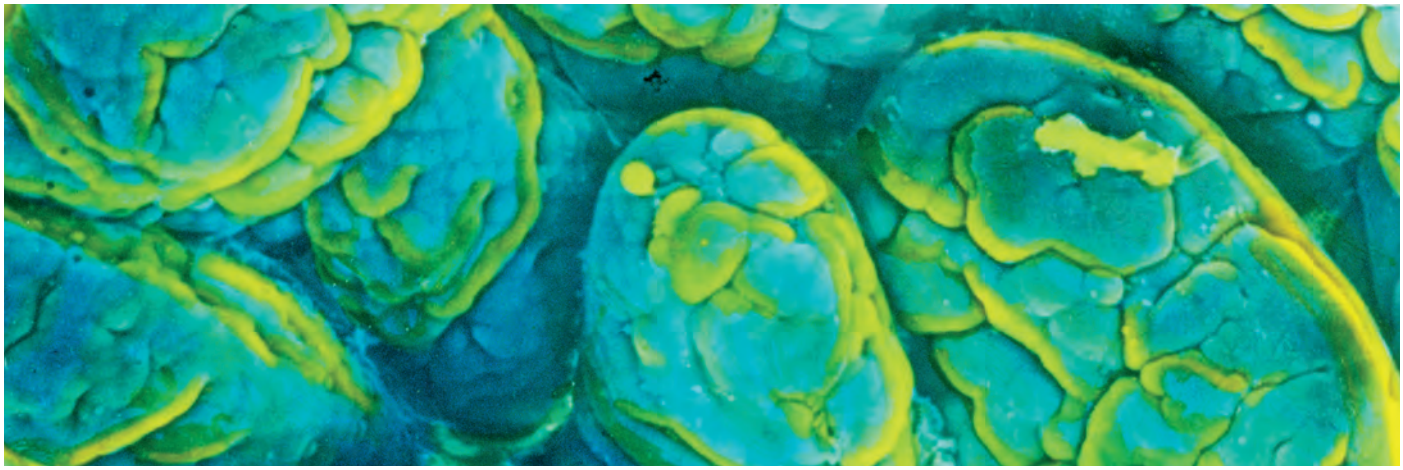
Readily available nutritional supplements

Scope	High performing animals, reared under intensive production conditions, are susceptible to several diseases. Feed intake will be affected at first by Pathogenic challenges and environmental stress. As a result, animals become weaker due to the lack of nutrients which are needed for proper immune response and maintenance. But even if animals are inappetent, they maintain water intake. Drinking water can be a medium to provide support which is needed for nutritional stability and recovery. Vitamins, minerals and other micronutrients are of great importance for health and productivity of animals. Supplementation through drinking water is recommended to reduce the risk of nutritional imbalance at specific stages of life cycle.
Description	Complementary feed – Nutraceutical solution. Supplementary micronutrients and plant extracts for drinking water to support liver function.
Components	Mixture of vitamins, plant extracts and carrier.
Physical & Technical Specifications	**Physical appearance** : liquid **Density** : 1,2 kg/l **L-carnitine** : 50.000 mg/l **Choline chloride** : 150.000 mg/l **Artichoke extract** : 25.000 mg/l **Sorbitol** : 400.000 mg/l **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,5 – 1 ml/l of drinking water. During 5 - 6 days. Repeat after 7 days if needed. **Broiler (ml/kg BW)**: Broilers starter : 0,23 - 0,46; Broilers grower/finisher : 0,13 - 0,26 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,11 - 0,22; Pre-Lay (14-18 weeks) : 0,08 - 0,15; Layer (>18 weeks) : 0,09 - 0,17 **Turkey (ml/kg BW)**: Week 1-4 : 0,14 - 0,27; >4 weeks : 0,07 - 0,13 **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,06 - 0,11; > 6 weeks after weaning : 0,04 - 0,07 **Sow (ml/kg BW)** : 0,03 - 0,05
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10515**

Enhance productivity

Novyrate® EB L

Water soluble esterified butyrins for gut integrity

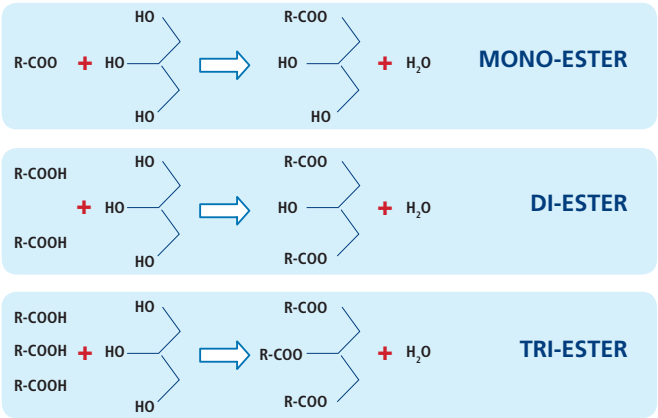


Esterified butyrins are combined molecules composed of a glycerol structure and butyrate molecules. The final result of the esterification is a combination of mono-, di- and tributyrins which act as a source of butyrate molecules in the intestinal tract.

Based on the molecule's origin, it is easy to understand that these "fat-type" structures can only be digested in the presence of the digestive enzyme lipase. By definition, this guarantees full stomach bypass properties at the level of the stomach while being activated after pancreatic lipase has been added.

During the esterification process, it is of utmost importance that the reaction is controlled carefully in order to guarantee the desired stability of the product.

A correct catalyst, the right esterification speed and the final purification step need expertise and deep chemical knowledge. This results in a highly concentrated, pure and clear product with a high stability in time and during pelleting process, guaranteed without the typical smell of butyric acid.



Enhance productivity

Novyrate® EB L

Water soluble esterified butyrins for gut integrity

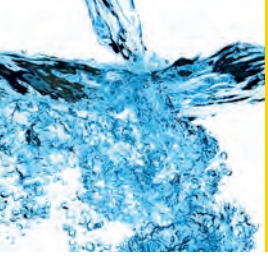
Butyrate modes of action:

1. Stimulating growth of villi and micro-villi as preferred energy source
2. Balancing microflora with selective control on pathogens and micro-organisms
3. Reinforcing the intestinal defense by stimulating intestinal release of HDP (host defense peptides)
4. Enhancing the intestinal barrier by facilitating tight junction assembly
5. Protecting intestinal cells from bacterial invasion and translocation
6. Acting as a signaling molecule
7. Protecting from oxidative stress by decreasing oxidative injury of tissues
8. Potent anti-inflammatory effect and positively affecting the immune system
9. Limiting the invasiveness of salmonella by reducing its colonization
10. Reducing incidence of necrotic enteritis

Key features and benefits of mono-esters:

Different forms of esters have different activities and benefits. Esters are not pH dependent (like organic acids).

- **pH stable**
  ⟶ (+ passes the stomach & crop)
- **Small molecule**
  ⟶ (+ easy uptake by bacteria leading to internal hydrolysis and effective anti-bacterial activity)
- **1 side chain only**
  ⟶ (+ escape from endogenous lipase)
- **Uptake in the bloodstream**
  ⟶ (+ action within the whole metabolism)
- **Water soluble**



Novyrate® EB L is:

- Liquid
- 100% H_2O-soluble
- With NO smell
- Non-corrosive (not ADR)

Novyrate® EB L combines butyrate supply (quantity) and strong antibacterial activities (quality).

MIC	S. Typhimurium	E. Coli
Butyric acid	1:400	1:400
Mono-esterified butyrins	1:1600	1:800

MIC concentrations: Antibacterial power (in vitro): acids VS. mono-esters (Innovad® 2012)

Dosage and application:

Dose (ml/kg BW)	0,12-0,24	0,06-0,12	0,06-0,09	0,03 – 0,14

Dose (ml/kg BW)	0,01- 0,11	0,03 - 0,05	5 - 20
Direction of use	Continuous use – Focus on young animals		

Novyrate® EB L

Water soluble esterified butyrins for gut integrity

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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Novyrate® EB L

Optimal solution for gut integrity

Scope	The increasing animal genetic potential puts a significant stress on the animals' digestive system, often leading to a suboptimal digestive process and nutrient absorption. The negative impact of sub-optimal feed utilization has a significant impact on the economic viability of the farm. Mono-butyrin is an important dietary component that can help balance and stimulate a healthy intestinal microflora.
Description	Complementary feed – Nutraceutical solution. A synergetic combination of esterified butyrins, with immediate activity in the early part of the intestinal tract, and a prolonged effect towards the hindgut.
Components	Esterified butyrins and glycerol.
Physical & Technical Specifications	**Physical appearance** : liquid **Colour** : colourless **Odour** : neutral **pH (10%)** : 4 – 5 **Density** : 1,13 – 1,22 kg/l **Moisture (KF)** : max. 1% **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application** 0,125 – 1 ml/l of drinking water.

Broiler (ml/kg BW)	Broilers starter	:	0,12 - 0,24
	Broilers grower/finisher	:	0,06 - 0,12
Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	:	0,06 - 0,09
	Pre-Lay (14-18 weeks)	:	0,06 - 0,09
	Layer (>18 weeks)	:	0,06 - 0,09
Turkey (ml/kg BW)	Week 1-4	:	0,07 - 0,14
	>4 weeks	:	0,03 - 0,07
Pig (ml/kg BW)	< 6 weeks after weaning	:	0,04 - 0,11
	> 6 weeks after weaning	:	0,01 - 0,03
Sow (ml/kg BW)		:	0,03 - 0,05
Calves (ml/head/day)		:	5 – 20

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1,0 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10204**

Natural Solutions

Aflorin® Liva L
Aflorin® BF L
Aflorin® P L

Phytogenics are gaining importance in animal production due to antibiotic resistance, antibiotic ban, harmful residues and because they offer a cost effective and safe solution.

Phytogenics are a wide range of natural substances that have a botanical origin, processing and composition. In animal production, it is widely accepted that phytogenics improve performance because they

- can increase feed intake
- can improve gut function
- have anti-oxidative benefits
- have an antimicrobial action
- have a physiological effect

Throughout history, phytogenic plants were utilized to improve health and comfort. Because of their holistic and broad range of actions, they became an attractive alternative to antibiotic growth promoters in livestock production. At Innovad®, we go beyond growth promotion as the primary use of phytogenetics. Through years of research, Innovad® deeply understands the potential of phytogenic substances and shares this knowledge through its products.

Aflorin® Liva L
Herbal extracts for liver protection

Aflorin® BF L
Natural concept to combat oxidative stress

Aflorin® P L
Ultimate aid for respiratory problems

The advantage of this approach is that we can offer products tailored for specific solution of every individual customer. Products that are tailored for the specific problems in respiratory, digestive and in stressful conditions. Thanks to years of on-the-farm knowledge, worldwide orientation and the ability to quickly translate new insights into practical products.

Our aim is to optimize the productivity of animals, Innovad® can offer this in a natural way.

Aflorin® Liva L

Herbal extracts for liver protection

The liver is the biggest solid organ of the body and performs a wide range of functions.
The liver performs many essential functions related to digestion, metabolism, immunity, and the storage of nutrients within the body.

As this organ is the center of metabolic acitivity, high producing animals with an always increasing genetic potential will highly solicitate and even stress the liver. Furthermore, toxins in general such as medication, mycotoxins, contaminants, pesticides are efficiently detoxified. This process of detoxification will have an additional load on the functioning of the liver.

Aflorin® LIVA L combines various plant extracts and liver protective compounds selected to maintain, support and to restore organ function in case of high metabolism.

Aflorin Liva L supports the animal during:

- Mycotoxin contamination
- Rancid fat in the diet
- Fast growth and high metabolic demand
- Mobilization of fat in the liver
- Heat stress
- Fatty liver

Dosage and application:

						
Dose (ml/kg BW)	0,23 - 0,92	0,13 - 0,51	0,08 - 0,44	0,07 - 0,54	0,04 - 0,22	0,03 - 0,09
Direction of use	Treatment for 3-5 days					

Aflorin® LIVA L

Herbal extracts for liver protection

innovad LABORATORIES

Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Aflorin® LIVA L

Herbal extracts for liver protection

Scope	The high genetic potential of farm animals require a maximum metabolic activity in order to digest, absorb and use the different nutrients coming from high density diets. These metabolic processes require an optimal condition and functioning of all organs involved in order to maintain overall health status, which is key for economical animal production.
Description	Complementary feed – Nutraceutical solution. Composition of plant extracts and micronutrients.
Components	Plant extract, yeast extracts, amino acids, sorbitol and flavouring compounds.
Physical & Technical Specifications	**Physical appearance** : viscous liquid **Colour** : brown **pH (10%)** : 3 – 4 **Density** : 1 – 1,1 kg/l **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,5 – 2 ml/l of drinking water. During 3 – 5 days. Repeat after 7 days if needed. **Broiler (ml/kg BW)**: Broilers starter : 0,23 - 0,92; Broilers grower/finisher : 0,13 - 0,51 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,11 - 0,44; Pre-Lay (14-18 weeks) : 0,08 - 0,3; Layer (>18 weeks) : 0,09 - 0,34 **Turkey (ml/kg BW)**: Week 1-4 : 0,14 - 0,54; >4 weeks : 0,07 - 0,26 **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,06 - 0,22; > 6 weeks after weaning : 0,04 - 0,14 **Sow (ml/kg BW)** : 0,03 - 0,09
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10360**

Aflorin® BF L

Natural concept to combat oxidative stress

AFLORIN® BF L is a unique formulation of water soluble source of polyphenols and powerful chelators, representing an efficient source of antioxidants, reinforcing the natural antioxidant defense system and offering a good tool to improve the aspect of meat quality.

Causes of oxidative stress are various

- Disease challenge (bacteria and viruses)
- Mycotoxins
- Fast growth
- High metabolic demand
- Heat stress
- Oxidized fat
- Dietary sources of free radicals
- Hatching and transportation

Reactive oxygen species (ROS) are formed by cellular respiratory activity. As a result of incomplete reduction of oxygen, ROS are a very aggressive molecules, ready to damage the important metabolic process. Especially tissue organs with a high metabolic rate are susceptible to significant levels of ROS. Ideally these free radicals are neutralized by the body's own anti-oxidant systems.

Oxidative stress results from an imbalance between levels of antioxidants and reactive oxygen species. Oxidative stress occurs when the equilibrium is upset by excess levels of reactive oxygen species or depletion of antioxidant defenses.

Research for new bio-efficient antioxidants has particularly focused on natural antioxidants to respect the consumer concerns over safety and toxicity. Grape seeds and by-products of wine and green tea extracts processing provide an abundant source of flavonoids and polyphenols. It has been reported that the antioxidant potential of grape seed extract is 20 and 50 times greater than vitamins E and C respectively, arising from increased levels of polyphenols.

Dosage and application:

Treatment	0,23	0,13	0.08-0.11	0.07-0.14	0,04-0,06	0,03
Prevention	0,1-0,15	0,05-0,08	0,03-0,07	0,03-0,08	0,01-0,03	0,01 - 0,02
Duration	Treatment for 3-5 days. Repeat after 7 days if needed.					

Aflorin® BF L

Natural concept to combat oxidative stress

innovad LABORATORIES

Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Aflorin® BF L

Natural concept to combat oxidative stress

Scope	Oxidative stress results from imbalance between levels of antioxidants and reactive oxygen species. Oxidative stress occurs when this equilibrium is upset by excess levels of reactive oxygen species or depletion of antioxidant defenses.
Description	Complementary feed – Nutraceutical solution. A well balanced synergistic mixture of carefully selected additives for use in intensive livestock production through drinking water.
Components	Mixture of bioflavonoids and other polyphenols with powerful chelators.
Physical & Technical Specifications	**Physical appearance** : liquid **pH (10%)** : 1,5 – 2,5 **Density** : 0,9 – 1,1 kg/l **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,2 – 0,5 ml/l of drinking water. During 3 – 5 days. Repeat after 7 days if needed. Higher dosage rate is recommended prior to slaughter and stress.

			Prevention	Treatment
Broiler (ml/kg BW)	Broilers starter	:	0,1 – 0,15	0,23
	Broilers grower/finisher	:	0,05 – 0,08	0,13
Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	:	0,04 – 0,07	0,11
	Pre-Lay (14-18 weeks)	:	0,03 – 0,05	0,08
	Layer (>18 weeks)	:	0,03 – 0,05	0,09
Turkey (ml/kg BW)	Week 1-4	:	0,05 – 0,08	0,14
	>4 weeks	:	0,03 – 0,04	0,07
Pig (ml/kg BW)	< 6 weeks after weaning	:	0,02 – 0,03	0,06
	> 6 weeks after weaning	:	0,01 – 0,02	0,04
Sow (ml/kg BW)		:	0,01 – 0,02	0,03

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10129**

Aflorin® P L

Ultimate aid for respiratory problems

Modern intensive animal operations are susceptible to high economic costs from disease outbreaks due to a high concentration and genetic uniformity of animals present. Exotic Newcastle Disease, Salmonellosis and Avian Influenza are three of the most concerning diseases from a cost and zoonotic perspective.

Factors that influence the development of respiratory disease

1. The animal

Age, species and genetics , will have a major impact on the susceptibility of the animal to pathogens.

2. The pathogen

Diseases can be caused by bacteria, viruses and fungi. A respiratory disease is seldom associated with one pathogen. In the majority of cases, we see primary and secondary infections. The secondary (bacterial) infections such as mycoplasma and other associated pathogens may often lead to a high mortality.

- **Viral infections of respiratory tract**

Haemorrhagic lesions in trachea

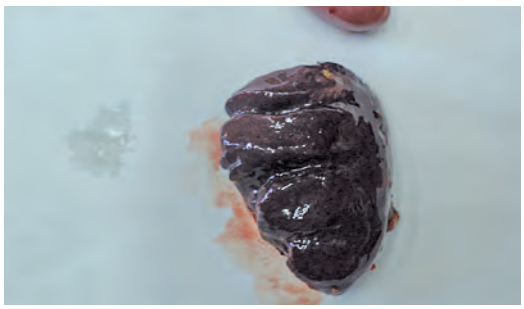
Infectious bronchitis variant

Aflorin® P L

Ultimate aid for respiratory problems

- **Bacterial infections (secondary)**

Damage caused by inflammation
to the tracheal wall



Pneumonia

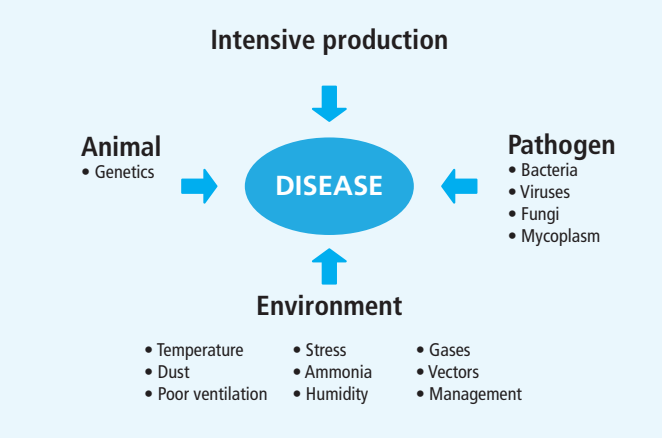
Very acute nasopharingeal inflammation

3. Housing density

A more intensive production is responsible for the increase in respiratory problems.

4. Ammonia level

Ammonia and ammonia solutions are irritant and corrosive and may be harmful by all routes of exposure. Acute oral exposure rapidly results in pain, excessive salivation and burns to the mouth, throat and esophagus.

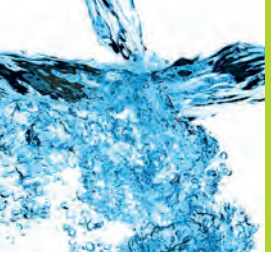


Aflorin® P L

Essential oils are mixtures of compounds that are characterized by their capacity to generate flavour or aroma and are generally obtained from spices, aromatic herbs, fruits, and flowers. Analysis of essential oils shows that, of the different constituent compounds, terpenoids are the most abundant and are present as either hemiterpenes, monoterpenes or sesquiterpens and as their derivatives.

Aflorin® P L Benefits:

- Improves respiration and air passage.
- Reduces mucus accumulation and discharge out of respiratory cavities.
- Reduces the negative effects of disease as well as quick recovery.
- Reduces stress and loss of valuable feed intake.
- Improves resistance to all respiratory infections.
- Reduces the negative effect and stress due to live vaccination.
- Improves survivability and reduces mortality.



Composition of Aflorin® P L

Menthol

- Volatile
- Soothing
- Antibacterial
- Stimulant
- Easy breath
- Reduce mucus inflammation

Eucalyptus

- Antibacterial
- Aid on bronchi exhalation
- Antiviral
- Improves respiratory health
- Aid on mucus excretion from sinus

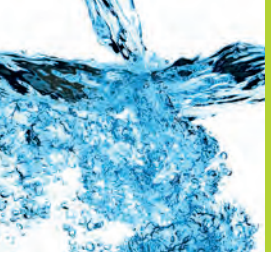
Plant sterols Saponin

- Emulsifier
- Bind free ammonia from air
- Improve absorption of active compound
- Help on dispersing particle
- Aid quick recovery

Dosage and application:

- By coarse spray 200 ml / 10 liter of water, sprayed for 20000 chicks/starters.
- Ideally application should be twice a day.

Dose (ml/kg BW)	0,12	0,03	0.03-0.12	0.03-0.12	0.03-0.12	0,03
Direction of use	During 3 days in case of CRD or post vaccination. Do not mix with vaccine.					



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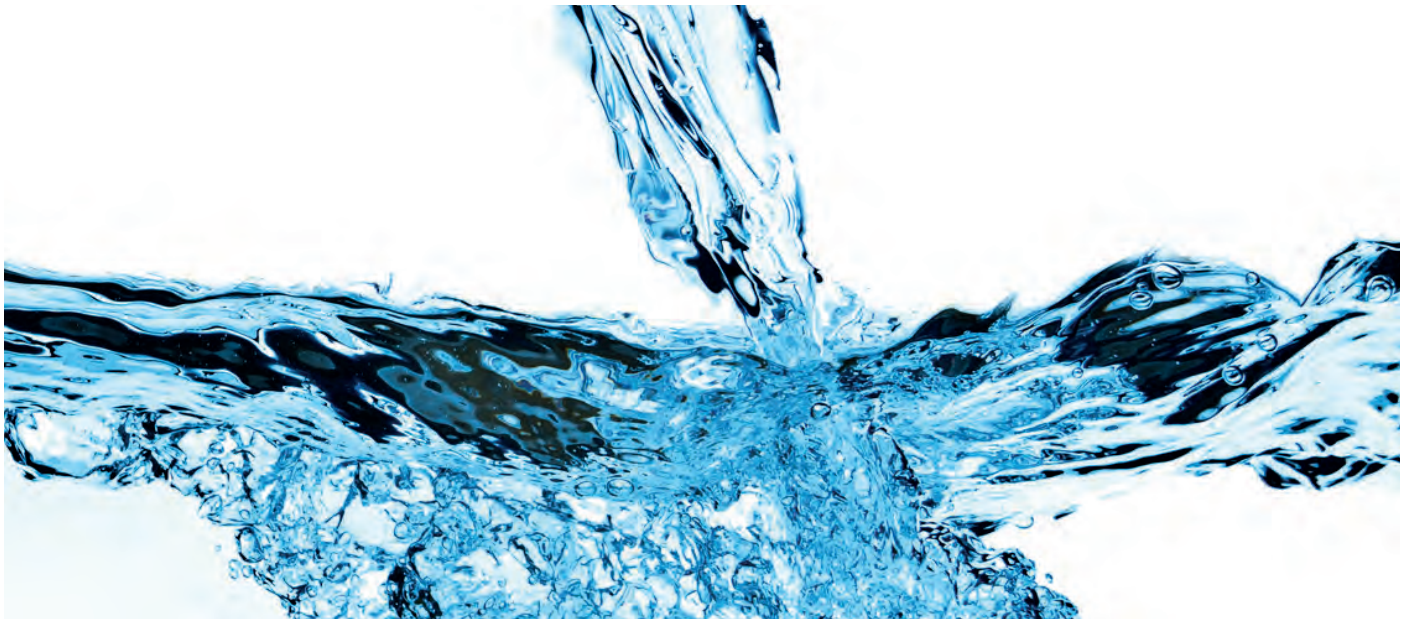
Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

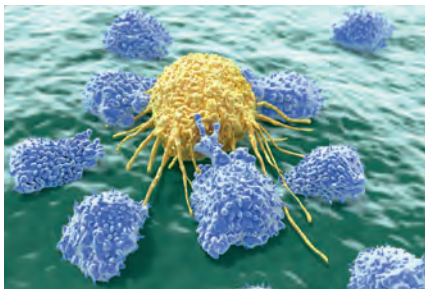
Aflorin® P L

Ultimate aid for respiratory problems

Scope	Respiratory problems often result in reduced appetite, feed intake and production. Selected aromatic plant extract support respiratory conditions and improve overall animal performance.
Description	Complementary feed – Nutraceutical solution. Liquid supplement for temporary use in drinking water.
Components	Powerful aromatic plant extracts, Yucca schidigera, solvents, carrier.
Physical & Technical Specifications	**Physical appearance** : liquid **Colour** : yellowish transparent **Flavour/Odour** : aromatic **pH (10%)** : 5,2 – 6,2 **Density** : 0,95 – 1,05 kg/l **Solubility in water** : 100% **Moisture (KF)** : max. 55% **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: Via drinking water: 0,2 ml/l per 20.000 birds, twice per day, during 3 days. Via batch treatment or dosing system. By spraying: 200 ml/10 l per 20.000 birds, twice per week or if needed. Use fine nozzle. Innovad® recommends to withdraw Aflorin® P L 1 day prior to 2 days post live vaccination. Do not mix with vaccine. **Broiler (ml/kg BW)**: Broilers starter : 0,12; Broilers grower/finisher : 0,03 **Pullet – Layer and breeder (ml/kg BW)**: Pullet (1-14 weeks) : 0,12; Pre-Lay (14-18 weeks) : 0,03; Layer (>18 weeks) : 0,03 **Turkey (ml/kg BW)**: Week 1-4 : 0,12; >4 weeks : 0,03 **Pig (ml/kg BW)**: < 6 weeks after weaning : 0,12; > 6 weeks after weaning : 0,03 **Sow (ml/kg BW)** : 0,03
Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10096**



Efficient Protection



Novitech® Y L
Escent® L
Lumance® L

Prevention is the most efficient and cost-effective way of managing diseases. While many approaches to husbandry, such as vaccination, are disease specific, Innovad® has developed a novel and water soluble solution that boosts the immune response of animals during vaccination. **Novitech® Y L enhances the maturity of the immune system in the animal.**

Safeguarding the health and productivity of the animals starts with their immunity. **Novitech® Y L fortifies the immune system of the animal at any time needed.** To protect the animal further from unforeseen toxin challenges, Innovad® supports its clients through risk assessment tools on mycotoxins plus comprehensive advice. This will not only help to protect the health of animals but also of your business.

Following a successful vaccination, other challenges such as the contamination of toxins in the feed can be a major problem.

Mycotoxins have the capacity to alter normal immune function when present in feed at levels below observable overt toxicity. Therefore, mycotoxins are dubbed "silent killer", "invisible thieves" and "unavoidable contaminant.

Escent® L can offer a quick response measure because of its ease in application. With Innovad®'s risk assessment tool, a quick response can easily initiated while waiting for safer feed.

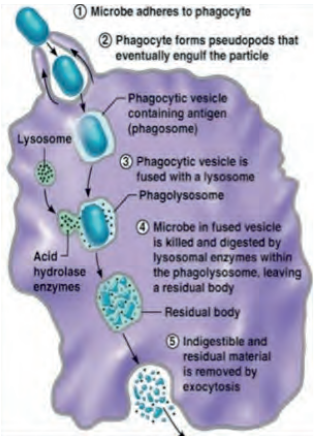
Controlling microflora in the lumen and strengthening the intestinal epithelium integrity should be the basis of a comprehensive **GUT HEALTH MANAGEMENT program**, aiming at reducing medication or cocktails of medication. **Lumance® L** is a complex, combining slow release technologies, ensuring that acids, medium chain fatty acids, butyrate, essential oils, anti-inflammatory compounds and polyphenols are delivered in a gut active way for a powerful and effective antibacterial control.

- **Novitech® Y L** immunity is a priority.
- **Escent® L** easy and essential for mycotoxin control, support and prevention through drinking water.
- **Lumance® L** intestinal health solution to lower medication.

Efficient protection

Novitech® Y L

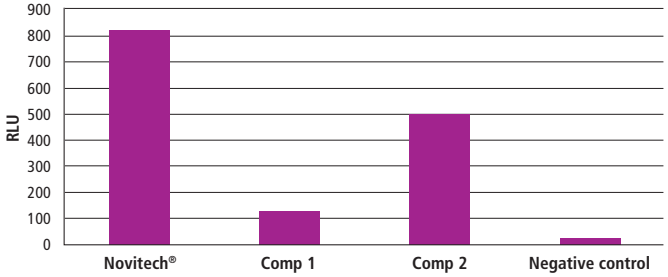
Immune fortifying solution



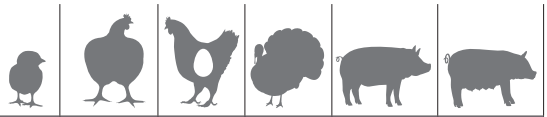
In biology, immunity is the state of having sufficient biological defenses to avoid infection, disease, or other unwanted biological invasions. It is the capability of the body to resist harmful microbes from entering it. Immunity involves both specific and non-specific components. The non-specific components act either as a barrier or as eliminators of a wide range of pathogens irrespective of antigenic specificity. Other components of the immune system adapt themselves to each new disease encountered and are able to generate pathogen-specific immunity.

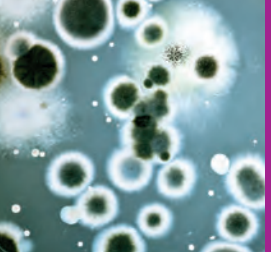
Novitech® Y L is a source of hydrolyzed yeast, fortified with directly available energy and nutritional additives. Yeast is known to be rich in Beta-Glucans and Mannan-oligosaccharides. In order to obtain high availability of the Beta-Glucans and Mannan-oligosaccharides, the hydrolization process is crucial and should be done properly. Both components will stimulate the non-specific immunity (macrophage stimulation) and help to establish a balanced and healthy microflora (selective antibacterial function).

Production of superoxide and O-radicals by monocytes



Dosage and Application:

						
Dose (ml/kg BW)	0,23-0,92	0,13-0,51	0,08-0,44	0,07-0,54	0,04-0,22	0,03-0,09
Direction of use	Treatment for 5-6 days.					



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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Novitech® Y L

Immune fortifying solution

Scope	Production pressures along with customer demands for improved animal well-being and removal of Antibiotic Growth Promoters have placed immunity and our capacity to modulate the animal's immune system and the intestinal microbiota structure in the forefront of animal production concerns. Bacterial contamination still accounts for important economic losses in intensive poultry and pig production. Especially E.coli and Salmonella are a problem and can have disastrous economic consequences. The antimicrobial activity of certain organic acids especially in well-proportioned and reacted synergistic combinations are widely recognised, while yeast components such as Beta-glucans and Mannan-oligosacharides can be added to improve reactivity of the non-specific immune function.
Description	Complementary feed – Nutraceutical solution. A well balanced mixture of yeast, powerful acids and micro-nutrients.
Components	Phosphoric acid, citric acid, malic acid, propylene glycol, yeasts, sorbitol, betaine and carrier.
Physical & Technical Specifications	**Physical appearance** : viscous liquid **Colour** : light brown **Density** : 1,7 – 2,7 **pH (10%)** : 1 – 1,1 kg/l **Colour change or variation does not affect performance.**

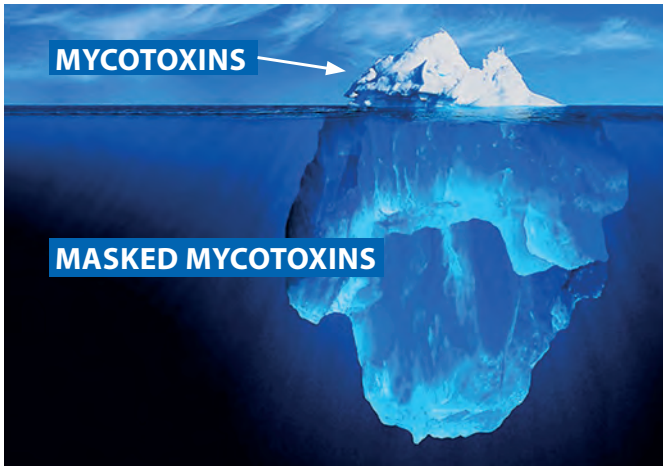
Application & Dosage	**Indicative dosage and Application**	0,5 – 2,0 ml/l of drinking water. Treatment for 3 – 5 days. Repeat after 7 days if needed.	
	Broiler (ml/kg BW)	Broilers starter	: 0,23 – 0,92
		Broilers grower/finisher	: 0,13 – 0,51
	Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	: 0,11 – 0,44
		Pre-Lay (14-18 weeks)	: 0,08 – 0,3
		Layer (>18 weeks)	: 0,09 – 0,34
	Turkey (ml/kg BW)	Week 1-4	: 0,14 – 0,54
		>4 weeks	: 0,07 – 0,26
	Pig (ml/kg BW)	< 6 weeks after weaning	: 0,06 – 0,22
		> 6 weeks after weaning	: 0,04 – 0,14
	Sow (ml/kg BW)		: 0,03 – 0,09

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1,0 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10359**

Efficient protection

Escent® L

Mycotoxin prevention and stress relief



Stress is dynamic, complex

In commercial poultry production, increasing resilience has been achieved through breed selection (genetic improvement) and nutritional optimization as well as the use of feed additives in order to improve performance and health. In poultry management, stress factors such as handling, sudden environmental changes and vaccine and disease challenges are minimized. Any treatment that prevents or minimizes stress translates into growth promotion. Animals possess a limited natural resistance and immunity against colonization or infection by potentially pathogenic micro-organisms or other toxic components.

Sources of stress

1. Multiple mycotoxins, hidden toxins and undetected endotoxins

Mycotoxins decrease the function of organs such as the liver and kidneys.

2. Old and emerging diseases

Diseases are major concerns within intensive animal production. Mycotoxins have a significant negative impact on the poultry defense mechanism and immune system.

3. Enteric diseases: Bacterial enteritis – dysbacteriosis

The mycotoxin deoxynivalenol predisposes for the development of necrotic enteritis in broilers. Subclinical necrotic enteritis (NE) is an economically important enteric disease caused by Gram-positive, anaerobic bacterium, Clostridium perfringens.

4. Oxidative stress

Considering that mycotoxins are among the stress factors that have a negative effect on pro and antioxidant balance in the body and especially in the cell, reactive oxygen species can get out of balance. This may lead to a situation whereby the bird is no longer able to quickly detoxify these products, leading to oxidative stress. Such a wide spectrum of challenges requires a combined approach to maintain and improve the overall production condition.

The fusarium mycotoxin, deoxynivalenol (DON), is a common feed contaminant that may damage intestinal epithelial cells and/or their intercellular junctions, subsequently inducing protein leakage (Girish and Smith, 2008). Consequently it may predispose to the development of NE.

Efficient protection

Escent® L

Mycotoxin prevention and stress relief

Escent® L

Especially designed product for drinking water application, which is synonym for flexibility, efficiency and profitability, and has a **very wide action radius**.

Escent® L reduces and overcomes stress induced health problems related to the following product features:

- Diuretic effect
- Liver tonic, enhancing excretion of harmful metabolites
- Detoxifier power
- Immune response support
- Water intake improver

Escent® L is a liquid anti-stress solution for mycotoxin control and animal revitalization that is innovative and combines **yeast extracts, yeast fermentation products *(Saccharomyces cervisiae)* with bioactive contents**, chelators, energy sources, minerals, botanicals and organic acids. It ensures a critical supply of nutrients and supportive molecules to counteract the negative impact of feed refusal on metabolism and microflora.

Apart from being safe for the user, the animal, the equipment and the environment, **Escent® L** is a non-corrosive, organic, bio-degradable, stable and water soluble suspension. This liquid application is ideal in situations in which stressed animals reduce their feed intake but continue to drink.

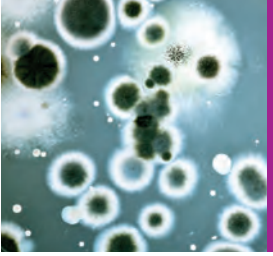
Escent® L use: Treatment can be started for all clinical cases of mycotoxicosis and the prevention thereof, as well as in circumstances of stress, severe disease conditions, immune-suppression or whenever animal performance is reduced.

Dosage and Application:

Dose (ml/kg BW)						
Treatment	0,46-0,92	0,26-0,51	0,15-0,44	0,13-0,54	0,07-0,22	0,05-0,09
Prevention	0,23-0,46	0,13-0,26	0,08-0,22	0,07-0,27	0,04-0,11	0,03-0,05
Direction of use	Treatment 5-7 days. Prevention 3-5 days					

Escent® L benefits:

- Provides fermentation extract which is known for its wide range of highly beneficial and **readily bio-available nutrients** (vitamins, minerals, amino acids, energy).
- Provides excellent media for **beneficial bacterial growth**.
- Vitalizes damaged organs such as the **liver and kidneys**.
- Maintains lower pH in the guts (acidification).
- Helps **to exacerbate proper fermentation** and eliminates toxins of the guts mal-fermentation.
- Detoxifies mycotoxins by Biotransformation and Caption (wide spectrum and highly efficient in acid media).
- **Reduces immune suppression**.
- Enhances animal **disease resistance** and defense system.
- Reduces negative effect of **oxidative stress**.
- **Reduces convalescence**.
- **Improves overall performance** under healthy or diseased conditions in terms of FCR, homogeneity and production index.



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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Escent® L

Mycotoxin prevention and stress relief

Scope	Raw material, feed and drinking water quality accounts for the larger part of a successful intensive animal rearing operation. They require special care in order not to make them a source of mechanism (poisonous substance, interference with digestibility, oxidation and free radicals) that affect feeding efficiency and animal production response. Such mechanisms can cause severe economic losses to the producer.
Description	Complementary feed – Nutraceutical solution. A well balanced liquid synergistic mixture of carefully selected additives for use in intensive livestock production through drinking water.
Components	Plant extracts, inactivated yeast and yeast extracts (Saccharomyces cerevisiae), citric acid, phosphoric acid, lactic acid, propylene glycol and carrier.
Physical & Technical Specifications	**Physical appearance** : transparent to cloudy liquid **Colour** : light to dark brown **Density** : 1 – 1,2 kg/l **pH (10%)** : 1,4 – 2,4 **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,5 – 2,0 ml/l of drinking water. Prevention during 3 – 5 days, treatment during 5 – 7 days. Repeat after 7 days if needed.

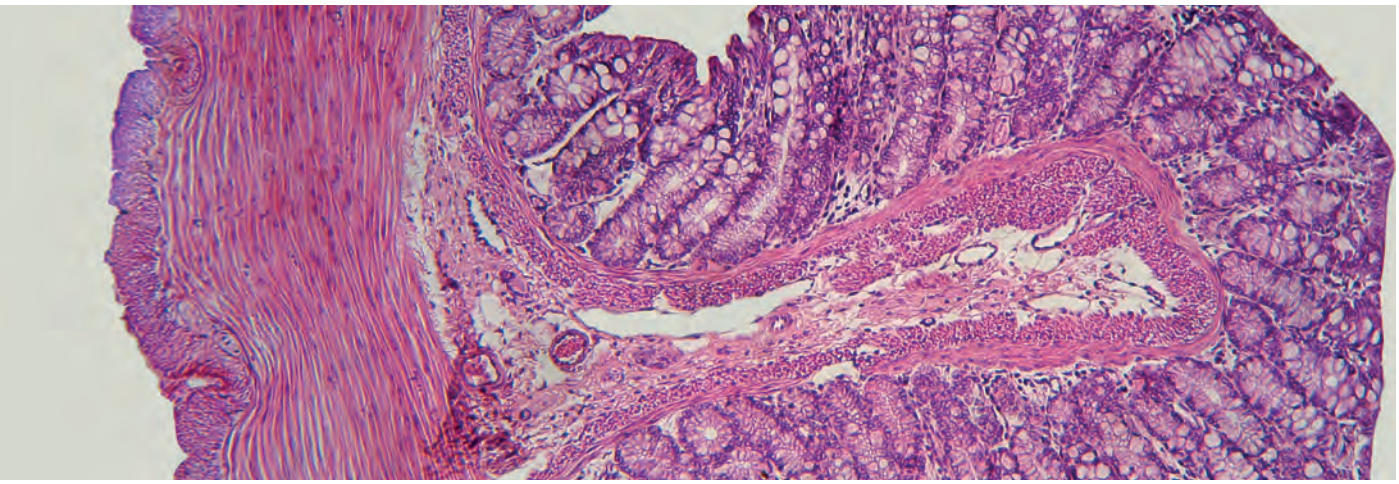
			Prevention	Treatment
Broiler (ml/kg BW)	Broilers starter	:	0,23 – 0,46	0,46 – 0,92
	Broilers grower/finisher	:	0,13 – 0,26	0,26 – 0,51
Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	:	0,11 – 0,22	0,22 – 0,44
	Pre-Lay (14-18 weeks)	:	0,08 – 0,15	0,15 – 0,3
	Layer (>18 weeks)	:	0,09 – 0,17	0,17 – 0,34
Turkey (ml/kg BW)	Week 1-4	:	0,14 – 0,27	0,27 – 0,54
	>4 weeks	:	0,07 – 0,13	0,13 – 0,26
Pig (ml/kg BW)	< 6 weeks after weaning	:	0,06 – 0,11	0,11 – 0,22
	> 6 weeks after weaning	:	0,04 – 0,07	0,07 – 0,14
Sow (ml/kg BW)		:	0,03 - 0,05	0,05 – 0,09

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10183**

Efficient protection

Lumance® L

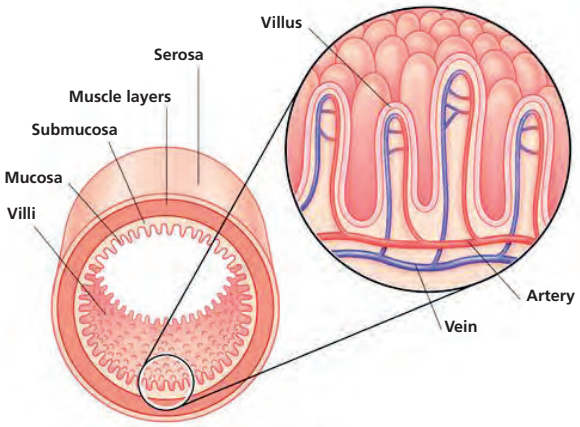
Intestinal health solution to lower medication



Intestinal health is the most determining factor for pig and poultry health in general, herd performance and eventually farm profitability. Harmful bacteria like E.coli may colonize in the gastrointestinal tract, resulting in clinical and sub-clinical diseases. Reduced feed intake and daily gain, inactivity and decreased social interactions are all observed in animals with bacterial infections.

Lumance® L integrated modes of action:

1. Reinforce gut integrity
2. Reduce inflammatory response
3. Balance the lumen and its gastro intestinal microflora
4. Protect against ROS



1. Reinforce gut integrity

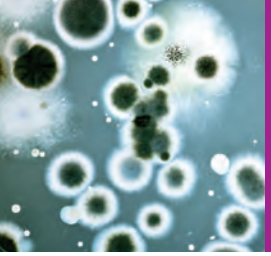
The area of the intestinal wall carries an important responsibility in selecting what can be absorbed and what should remain outside the body of the animal. To put this into the right perspective, it is important to realize that the surface of the intestinal tract is 300 times the size of the surface of the skin. At the same time, it should give the similar level of protection against invaders, while being highly permeable in order to absorb nutrients.

Tight junctions, a complex protein structure formed between epithelium cells, play a crucial role in protecting the insides of the animal from the challenges present in the lumen. Many molecules present in the digestive tract (free radicals, toxins,...) put these tight junctions under continuous stress, which increases the risk of passage of toxins and/or pathogenic bacteria through the intestinal wall, inside the animal's body.

Important butyrate modes of action to reinforce gut integrity:

- Stimulating growth of villi and micro-villi as preferred energy source
- Reinforcing the intestinal defense by stimulating intestinal release of HDP (host defense peptides)
- Enhancing the intestinal barrier by facilitating tight junction assembly

The totality of the intestinal integrity can additionally be protected by means of an intestinal coating. This protective layer, which is the result of complexation of tannin rich extracts



with proteins present in the mucus layer, can reduce the impact of invading mechanisms on the intestinal integrity itself.

2. Reduce inflammatory response

Inflammation of the intestinal tract is the result of an overactive immune response that is linked to an increased challenge of the intestinal immunity. As such, the production of inflammatory cytokines is a natural and positive response of the immune system, but the process is extremely energy demanding and will reflect almost instantly and significantly in the performance data of the farm. Although the anti-inflammatory properties of butyric acid are present and beneficial, certain plant extracts rich in alkaloids can largely be accounted for the anti-inflammatory reactivity of Lumance® L. Their mode of action is well defined and understood. The results show immediately in gain and FCR figures.

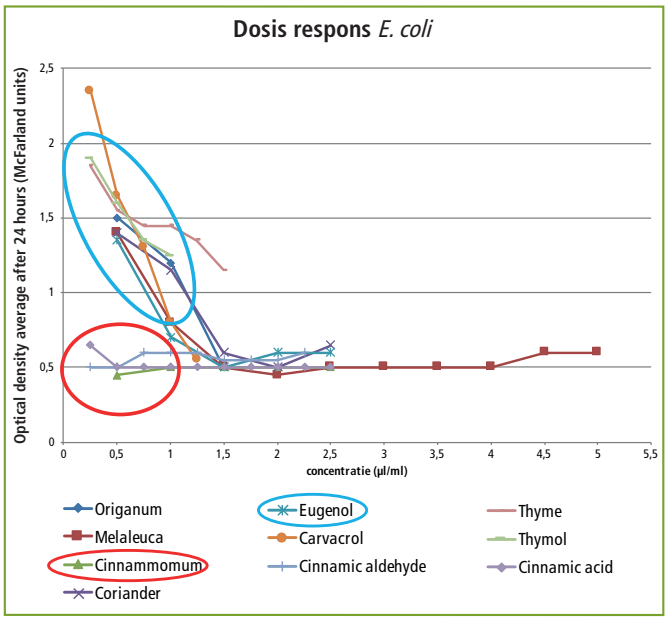
3. Balance the lumen and its gastrointestinal microflora

As important as intestinal integrity may be, proper attention should be given to a balanced microflora. In this context, Lumance® L does not strive to be an antibiotic complex, which eliminates all pathogens and beneficial bacteria. It is especially designed to reduce the impact of the pathogenic bacteria. Organic acids have been used for over 15 years to positively influence the intestinal balance of microorganisms. Besides short chain fatty acids, medium chain fatty acids (MCFA's) are also promising antibacterial compounds as they target pathogenic bacteria, which are less sensitive to SCFA. Plant extracts are general hydrophobic and are likely to enter into cell membranes of microbes, which disturbs their normal functionalities. Different essential oils are likely to have different molecular targets, which might explain the fact that combinations may be more effective than a single essential oil.

4. Protect against ROS

Different plant extracts, such as essential oils, are added because of their antioxidant activity which act complementary to the butyrates. Butyrates stimulate endogenous glutathione release which is the most important antioxidant in the animal's metabolism.

Botanicals enforce antibacterial activity



Eugenol and Cinnamic aldehydes interfere with the intracellular ATP (energy). They reduce the bacterial energy generation.

Dosage and Application:

Dose (ml/kg BW)	0,12-0,24	0,06-0,12	0,06-0,09	0,03-0,14	0,01-0,11	0,03-0,05
Direction of use	Treatment for 5-6 days.					

Lumance® L

Intestinal health solution to lower medication

innovad LABORATORIES

Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Lumance® L

Intestinal health solution to lower medication cost

Scope	The increasing animal genetic potential puts a significant stress on the animals' digestive system, often leading to a suboptimal digestive process and nutrient absorption. The negative impact of sub-optimal feed utilization has a significant impact on the economic viability of the farm. Butyric acid is an important dietary component that can help balance and stimulate a healthy intestinal microflora. Complementary to the this beneficial molecule, essential oils, plant extracts and specific fatty acids support the natural symbiosis between host and microflora under stressful conditions.
Description	Complementary feed – Nutraceutical solution. A well balanced synergistic mixture of carefully selected additives for use in intensive livestock production.
Components	Esterified butyrins, glycerol, essential oils, plant extracts and carrier.
Physical & Technical Specifications	**Physical appearance** : liquid **Colour** : amber **pH (10%)** : 3,5 – 4,5 **Density** : 1,12 – 1,22 kg/l **Moisture (KF)** : max. 2,5% **Colour change or variation does not affect performance.**
Application & Dosage	**Indicative dosage and Application**: 0,125 – 1 ml/l of drinking water.

Broiler (ml/kg BW)	Broilers starter	:	0,12 - 0,24
	Broilers grower/finisher	:	0,06 - 0,12
Pullet – Layer and breeder (ml/kg BW)	Pullet (1-14 weeks)	:	0,06 - 0,09
	Pre-Lay (14-18 weeks)	:	0,06 - 0,09
	Layer (>18 weeks)	:	0,06 - 0,09
Turkey (ml/kg BW)	Week 1-4	:	0,07 - 0,14
	>4 weeks	:	0,03 - 0,07
Pig (ml/kg BW)	< 6 weeks after weaning	:	0,04 - 0,11
	> 6 weeks after weaning	:	0,01 - 0,03
Sow (ml/kg BW)		:	0,03 - 0,05

Packaging	High quality HDPE export worthy recipients on wooden fumigated pallets. Available net weights: • 0,5 L - 1 L - 5 L nitrogen flushed and induction sealed, unit packs are packed in an outer carton up to max. 25 kg. • 25 L drums.
Shelf Life	2 years when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10323**

Farm application – drinking water

Poultry application

	Starter	Broiler	Layer	
Novicid® ES L	Water hygiene	Water hygiene	Water hygiene	Water hygiene
Novion® S L	Gut health and Water hygiene	Gut health and Water hygiene	Gut health and Water hygiene	Gut health and Water hygiene
Vitalite Supplement	Supplement	Supplement	Supplement	Supplement
Novyrate® EB L	Gut integrity	Gut integrity	Gut integrity	Gut integrity
Aflorin® LIVA L	Liver support	Liver support	Liver support	Liver support
Aflorin® P L	Respiratory support	Respiratory support	Respiratory support	Respiratory support
Aflorin® BF L	Stress support	Stress support	Stress support	Stress support
Novitech® Y L	Immune boost	Immune boost	Immune boost	Immune boost
Escent® L	Mycotoxin management	Mycotoxin management	Mycotoxin management	Mycotoxin management
Lumance® L	Intestinal health	Intestinal health	Intestinal health	Intestinal health

Farm application – drinking water

Swine application

	Lactation	Weaning	Grower	Gestation
Novicid® ES L	Water hygiene	Water hygiene	Water hygiene	Water hygiene
Novion® S L	Gut health and Water hygiene	Gut health and Water hygiene	Gut health and Water hygiene	Gut health and Water hygiene
Vitalite Supplement	Supplement	Supplement	Supplement	Supplement
Novyrate® EB L	Gut integrity	Gut integrity	Gut integrity	Gut integrity
Aflorin® LIVA L	Liver tonic	Liver tonic	Liver tonic	Liver tonic
Aflorin® P L	Respiratory support	Respiratory support	Respiratory support	Respiratory support
Aflorin® BF L	Stress support	Stress support	Stress support	Stress support
Novitech® Y L	Immune boost	Immune boost	Immune boost	Immune boost
Escent® L	Mycotoxin management	Mycotoxin management	Mycotoxin management	Mycotoxin management
Lumance® L	Intestinal health	Intestinal health	Intestinal health	Intestinal health

Farm application syringes and gels

Specific individually-dosed nutraceuticals

Farm application – syringes and gels

Specific individually-dosed nutraceuticals

Drinking water is an ideal medium to apply nutraceuticals, needed to treat a group of animals. It ensures proper dosing and distribution among the animals during a given period of time. As diseased animals keep drinking, it is also the best guarantee to ensure proper intake of the supplement, rather than via the feed.

However, for several reasons, treatment of the whole house is not always the most optimal solution.

Young chickens can be reached via drinking water the earliest 24 hours after hatching, while it is known that the absence of intestinal stimuli and dehydration within these 24 hours will have a major impact on the performance.

Immediately after birth, young piglets could be too weak and exhausted. By consequence, drinking water oriented solutions are not effective.

In case of intestinal disturbance, firm action is needed and highly concentrated solutions should be dosed to the animal directly to keep control of the situation, while in feed or in water applications can be very useful afterwards.

Specific individually dosed nutraceuticals

- **Specific:** the solution is designed and formulated for a very **specific** complication in the animal's life.
- **Individually dosed:** this way of distribution guarantees that the fully required dose is taken up by the animal, keeping economics reasonable as healthy and performing animals are not treated.
- **Nutraceuticals:** formulations, composed out of food grade and natural ingredients to provide extra health benefits, in addition to the basic nutritional value.

For this highly technological **Farm-Pack range**, **Innovad®** invested in a state of the art, tailor made homogenizer, which allows to combine, at a speed of 2900 rpm, fat soluble and water soluble components, dry and liquid products, to finally result in a homogenous, highly concentrated and emulsified matrix.

innovad LABORATORIES

Enhance Productivity

Vitalite Energy Chick
Nutritional and rehydration supplement for day old chicks.

Vitalite Energy Piglet
Energy rich supplement for newborn piglets.

Efficient Protection

Novyrate® Piglet
Gut conditioner for piglets.

Novyrate® Calf
Gut conditioner for calves.

Enhance productivity

Vitalite Energy

Energy rich supplement for newborn animals

Vitalite Energy offers early nutrient intake for day old animals. This aims at boosting viability and productivity through novel solutions in animal nutrition.

Vitalite Energy Piglet administers needed sugar, fat and basic nutrients through a paste in a dispenser.

Vitalite Energy Chick is an easy to peck nutrient for rehydrating and boosting poultry.

Vitalite Energy:
first day energy for young animals
to decrease mortality and optimize productivity.

Enhance productivity

Vitalite Energy Piglet

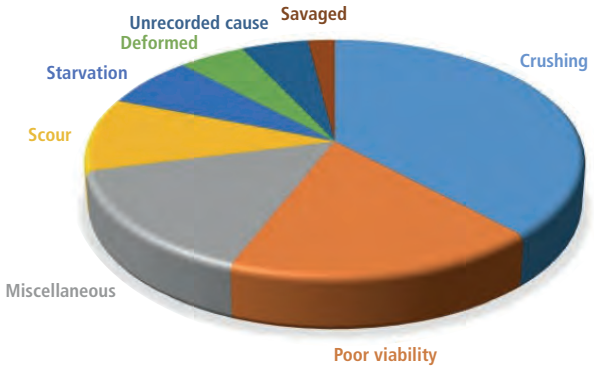
Energy rich supplement for newborn piglets

The first 24 hours following birth represent a critical period in the life of a pig. A neonate piglet's survival is a major problem especially during the first days of its life. Piglets are born deficient of energy. At the same time the requirement for energy is high because of its intense physical activity, and for its thermoregulation (high surface to body mass ratio).

Moreover, with highly prolific sows, piglets have to compete with numerous and variable littermates for a teat to suckle. Deviations in a piglet's body weight at birth associated with increased litter size, sow nutrition and management, together with other factors, lead to a high pre-weaning mortality, especially during the first days of a piglet's life. Pre-weaning mortality (PWM) remains an unsolved economic and welfare problem in pig production.

Many attempts have been made to identify the cause and key factors in PWM. Starvation leading to hypoglycemia, diarrhea and crushing are generally reported as the main direct cause of mortality. Additionally, exposure to cold after birth increases the energy requirement and makes the problem worse. By giving the animal its first day energy, it is able to tolerate cold, find and compete for nipples with littermates and be more reactive (reduced chance of crushing.)

Causes of pre weaning mortality in percentage



The energy demand of piglets to avoid hypothermia in the first postnatal 24 hours, can be avoided through external nutrient sources. It will also allow piglets to have better access to colostrum, which plays an essential role in piglet survival. Protein rich and energy filled nutritional supplements given during the first 24 – 48 hours post farrowing may allow utilization of colostrum to potentiate the immune response in piglets and the acquisition of passive immunity. This in turn improves the vitality of piglets and reduces pre-weaning mortality.

Vitalite Energy

Is a unique nutritional combination to increase a piglet's vitality and as a consequence its chances of survival. Every single dose will supply essential active components.

Lactose

- Availability of carbohydrates as glucose sources should be first met to determine if the piglet's life is threatened. Preventing hypoglycemia is the first priority in ensuring the life of the animal. Hypoglycemia leads to depressed heat production and compromised cerebral function. This is indicated by convulsion and coma.

Fatty acids

- Fat is a high density source of energy for the animal. A deficit in fat in first day of life reduces the period for which glycogen reserves can last. This will accelerate the use of carbohydrates and increases the chance of hypothermia.
- A good balance of energy sources is needed to achieve a more secure 24 hours of piglet life.
- Special fatty acids will accelerate development of brain functioning. Retarded developed piglets, usually the smallest at high litter size, will catch up faster.
- Undernutrition of essential fatty acids is prevented, triggering the immune system.

Essential nutrients

- Amino acids, vitamins and minerals are essential elements in early support and development. They provide the sufficient amount of needed nutrition for vitality and good immunity.

Nucleotides

- Are semi-essential nutrients that are hard to find in animal diets. Supplementation of nucleotides plays a key role in many biological processes.
- They are essential for neonatal animals when the endogenous supply is not sufficient.
- Dietary nucleotides have shown to improve intestinal morphology and function, immune response, liver function and growth performance.

Dosage and application:

- Administer to piglets with signs of digestive upset or diarrhea.
- **Dosage:** 3-6 ml per piglet (up to 4 months of age).
- **For newborn piglets:** administer as soon as possible after birth and place the piglet to the sow's teats afterwards. Repeat after 12 hours if needed. Pay extra attention to piglets with a birth weight less than 1,2 kg.

Vitalite Energy Piglet

Energy rich supplement for newborn piglets

innovad LABORATORIES

Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite Energy Piglet

Energy rich supplement for newborn piglets

Scope	Piglet survival during the first 3 days after birth is an important economic and animal welfare issue in commercial pig production. Piglets are born deficient of energy, but at the same time with a very high demand for energy for thermoregulation and physical activity. Litter competition poses an extra challenge for neonatal piglets to access the sow's teats in order to suckle colostrum. Energy and nutrient supplementation can be implemented in farrowing management to improve thermoregulation and enhance colostrum intake, leading to increased piglet survivability and welfare.
Description	Complementary feed – Nutraceutical solution. A unique nutritional combination to increase piglets' vitality.
Components	Yeast extracts, balanced amino acid pool, esters of lauric and butyric acid, lecithins, vegetable oils, highly digestible sugars and vegetable proteins, vitamin complex, milk products, nucleotides, organic acids and salts, trace elements, flavours and sweeteners, carriers.
Physical & Technical Specifications	**Physical appearance** : Paste **Colour** : Brown **Medium chain fatty acids (C12)** : 8,90 % **Short chain fatty acids (C4)** : 0,40 % **Crude ash** : 8,80 % **Crude protein** : 20 % **Crude oils and fats** : 18,30 % **Sodium (Na)** : 2,40 % **Vitamin A** : 45.000 IU/kg **Vitamin D3** : 4.000 IU/kg **Vitamin C** : 1.000 mg/kg **Vitamin E** : 120 mg/kg **Betaine HCl** : 12.000 mg/kg **NE pigs** : 2.200 Kcal/kg **Moisture (KF)** : Max. 31,60 % **Colour change or variation does not affect performance.**
Application & Dosage	**Vitalite Energy Piglet** is beneficial for all piglets after birth. In particular weak piglets due to farrowing accidents, mastitis, and other causes of pre-weaning mortality need special care. At weaning, a repetition of the treatment is valuable. Dosage: 3-6 ml per piglet (up to 4 months of age). For newborn piglets: administer as soon as possible after birth and place the piglet to the sow's teats afterwards. Repeat after 12 hours if needed. Pay extra attention to piglets with a birth weight less than 1,2 kg. Before use, bring the dispenser to room temperature of 20-25°C or put in luke warm water for easy handling. • Before administering, make sure the piglet's mouth contains no feed. • Place the tube on the nipple of the dispenser. • Insert the tube into the piglet's mouth, preferably on the back of the tongue. • Depress the head of the pump completely once or twice: 1 pump = 3 ml. • Allow the piglet to swallow it. • Close the dispenser with the cover after use; remaining paste may be used on following days until emptied. Before use or extension of use, contact your nutritionist for specific advice.
Packaging	High quality 100 or 250 ml airless dispenser with cover and plastic tube for easy application. Preset volume of the dispenser is 3 ml per pump. 6 dispensers are packed in a cardboard box.
Shelf Life	12 months when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10578**

Enhance productivity

Vitalite Energy Chick

Nutritional and rehydration supplement for day old chicks

After hatching, environmental and nutritional conditions have significant effects on the performance and productivity of animals. Physiological functions such as body temperature regulation, gastro intestinal tract (GIT) function, yolk absorption and utilization are all influenced by the first few hours of a bird's life. Recent studies suggest that providing the necessary nutrients (energy and water) could also improve absorption and utilization of yolk contents. The period after hatching and before gaining access to feed and water is very critical for a chick's survival and its target growth at days 7 to 10.

In commercial practice, post hatch birds undergo preparatory hatchery practices such as sexing, vaccination, packaging and transportation to farm houses. These practices may involve a holding period in which the animal does not have access to feed and water for 24 up to 36 hours. This induces stress in chicks due to energy deficiency and dehydration, which causes lower viability and impaired growth. It is observed that a chick's body weight is decreased by almost 8% when no water and feed is provided.

Important flock management considerations to think of during and after transportation:

Dehydration
Dehydration may occur at the hatchery or through extended transport time. Absence of fresh drinking water may lead to further development retardation or more serious issues such as gout.

Feed intake
Day old chicks have immature intestines which can only develop and mature when feed or ingesta pass through. The earlier the development of the intestinal structure, the better the absorption of nutrients and the faster the start-up phase of the animal.

Yolk absorption
Yolk absorption and utilization are important to prevent infection. Yolk contains a lot of fat and favoured nutrients that are ideal for bacterial growth. To increase yolk utilization, post hatch starvation should be reduced.

Vitalite Energy Chick

Is a unique combination to overcome the stressful first 48 hours of life. Its unique form, texture and colour encourage intake from young birds. It can supplement energy, amino acids, vitamins, minerals and water even before arrival at the farm house. It is a booster that offers different protective and active ingredients to ensure a proper intestinal start-up.

Energy: Highly absorbable and immediately metabolisable energy sources based on free fatty acids and simple sugars.

Nutrients: Because of the particular feed processing technology, all nutrients (starch, sugars, proteins, vitamins and traces) are highly digestible, which helps along the start of intestinal activity.

Water: High amount of moisture (80%) is present after preparation to ensure basic water uptake in order to stimulate rehydration.

Stress relief: Vitamins (E and C) are available to support the stressful period of the animal.

Intestinal development: Active components are included to avoid pathogen proliferation, stimulate feed intake and stimulate intestinal immune development.

Nucleotides: Are semi-essential nutrients that are hard to find in animal diets. Supplementation of nucleotides plays a key role in many biological processes. It is essential for neonatal animals when the endogenous supply is not sufficient. Dietary nucleotides have been proven to improve intestinal morphology and function, immune response, liver function and growth performance.

Enhance productivity

Vitalite Energy Chick

Nutritional and rehydration supplement for day old chicks

Dosage and application:

Administer to day old chicks (DOC) during transport or on top of pre-starter feed near drinking nipple.

DO NOT FEED THE POWDER FORM DIRECTLY TO THE CHICKS! The powder needs to be mixed with water until a firm gel is formed.

Administer the gel immediately after preparation: 1g/DOC present.

Distribute the gel in transport boxes at the hatchery or on top of pre-starter feed near drinking nipples.

If the viscosity is too high, a ratio of 1 kg powder and 5 liter water can be used alternatively, depending on the application and way of distribution. This indicates a distribution of 1,2 g/DOC.

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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Vitalite Energy Chick

Nutritional and rehydration supplement for day old chicks

Scope	After hatching, environmental and nutritional conditions have extreme effects on the performance and productivity of animals. Physiological functions such as body temperature regulation, gastro intestinal tract (GIT) function, yolk absorption and utilization are all influenced by the first few hours of a bird's life. Recent studies suggest that providing the necessary nutrients like energy sources, amino acids, vitamins, trace elements, nucleotides, electrolytes, etc. could also improve absorption and utilization of yolk contents. The period after hatching and before gaining access to feed and water is very critical for a chick's survival and its target growth at days 7 to 10.
Description	Complementary feed – Nutraceutical solution. A unique nutritional and rehydration combination to increase day old chicks' vitality.
Components	Probiotics, Highly digestible sugars, Balanced amino acid pool, Vitamin and mineral complex, Trace elements, Nucleotides, Electrolytes, Organic acids, their salts and their esters, Carriers and anticaking agents.
Physical & Technical Specifications	**Physical appearance** : Powder **Colour** : Creamy white **Short chain fatty acids (C4)** : 0,50 % **Crude ash** : 21,20 % **Crude protein** : 25,90 % **Crude fiber** : 0,25 % **Specific gravity** : 0,52 – 0,62 kg/l **Moisture** : Max. 3 % **Lysine** : 6,75 % **Methione** : 4,04 % **Sodium (Na)** : 2,05 % **Colour change or variation does not affect performance.**
Application & Dosage	Administer to day old chicks (DOC) during transport or on top of pre-starter feed near drinking nipple. **DO NOT FEED THE POWDER FORM DIRECTLY TO THE CHICKS!** The powder needs to be mixed with water until a firm gel is formed. • Heat water up to 70°C to reduce potential microbial count and cool down again to 50°C. • Poor 4 liter of water in a clean recipient. • Put 1 kg of Vitalite Energy Chick in the water and start mixing immediately. Within 1 min. the product will start gelling. (1 kg powder is needed for treatment of 5000 DOC.) • Keep mixing intensively until a homogenous gel is formed and constant viscosity is obtained. • Administer the gel immediately after preparation: 1 g/DOC present. • Distribute the gel in transport boxes at the hatchery or on top of pre-starter feed near drinking nipples. If the viscosity is too high, a ratio of 1 kg powder and 5 liter water can be used alternatively, depending on the application and way of distribution. This indicates a distribution of 1,2 g/DOC.
Packaging	5x 1kg sealed, high quality PE bags in 11L bucket. 15x 1kg sealed, high quality PE bags in export worthy cardboard boxes.
Shelf Life	18 Months when stored in a cool and dry environment out of direct sunlight in unopened packing.
Item Reference	**10579**

Efficient Protection

Novyrate® Paste

Gut conditioner

Scouring is the most common problem in piglets and calves. The pathophysiology of diarrhea could explain why the current approach of antibiotics and other measures have less success in reducing the negative effects of diarrhea.

Novyrate® Piglet and Novyrate® Calf efficiently protect the animal through different modes of action and stop the damage that diarrhea causes.

Novyrate® Piglet and Novyrate® Calf kill pathogens, protect intestine, absorb irritants and reduce inflammation.

Novyrate® Piglet and Novyrate® Calf:
is an effective paste to combat negative effects of diarrhea.

Efficient Protection

Novyrate® Piglet

Gut conditioner for piglets

Diarrhea is a common cause of mortality in piglets and is closely associated with a stressful environment, inappropriate husbandry, poor hygiene and feeding factors. Data on the prevalence of diarrhea showed that 15 – 30% of piglets are affected. Despite a high focus on controlling diarrhea, mostly with antibiotics, diarrhea occurrence remains high. Diarrhea is responsible for important economic losses due to mortality, morbidity and inefficient growth.

Pathophysiology of diarrhea

Osmotic diarrhea

Poorly absorbed solutes pull water into the intestinal lumen. It can develop from maldigestion and an insufficient digestive capacity of the animal.

Secretory diarrhea

Overstimulation of the intestinal tract's secretory capacity. This is characterized by large feces volume, absence of fever and persistence of diarrhea. A number of secretory stimuli can cause this type of diarrhea. These include bacterial enterotoxins and inflammatory mediators.

Exudative diarrhea

The intestinal epithelium's barrier function is compromised by loss of epithelial cells or disruption of tight junctions. Lymphatics will secrete water and electrolytes, mucus and proteins luminally. Some viruses invade the intestinal epithelium, causing enterocyte destruction, inflammation, villus atrophy and crypt hypertrophy.

Motility disturbance

Increased and decreased motility can cause diarrhea. Irritation of the gut increases motility. Irritation can be caused by some feed ingredients. A decrease in motility can cause bacterial overgrowth.

Common organisms that cause piglet diarrhea

	Age (days)					Mortality rate
	0 - 3	3 - 7	7 - 14	15 - 21	weaning	
Clostridia						High
Coccidiosis						Low
Colibacillosis						Moderate
PED						Low
PRRS						Variable
Rotavirus						Low
TGE						High

Antibiotics become a fast relief to treat diarrhea but the effectivity of antibiotics is always in question. Not just because of resistance, but also persistence of diarrhea can be caused by proliferation of other organisms such as Coccidia and Clostridium. Additionally, endotoxins remain systemically after antibiotic treatment so that recovery is not immediate.

With an understanding on the pathophysiology of diarrhea, Innovad® Laboratories offers an oral paste that treats diarrhea and speeds up recovery.

Novyrate® Piglet

Is a unique gut conditioner to prevent and hasten relief from diarrhea: increased villi proliferation, reduced intestinal inflammation and adsorption of toxins stop the progression of diarrhea and support animal recovery.

Every single dose will supply essential active components:

Natural anti-bacterial agents

- Organic acids for **antibacterial action**.
- Synergy with MCFA, for enhanced bacterial cell wall permeability and increased pathogens killing action.
- **Villi proliferation** and faster recovery.

Herb extracts blend

- Polyphenols that **protect the enterocytes** from further damage.
- Essential oils that **reduce inflammation and hypersecretion** of gut.
- Active ingredients that support **clearance of endotoxins** through the liver, thus faster recovery from fever and inappetence.

Adsorptive ingredients

- Exotoxin adsorption to prevent further villi damage and to stop enteric overstimulation.

Energy

- Highly absorbable and immediately metabolisable energy sources that give needed energy in periods of low feed intake.

In order to effectively rescue the animal from the negative effects of diarrhea, Novyrate® piglet was formulated by Innovad® Laboratories to address the different pathophysiology of diarrhea.

Dosage and application:

- Administer to piglets with signs of digestive upset or diarrhea.
- Administer daily 3-6 ml per piglet for 2-3 consecutive days.

Novyrate® Piglet

Gut conditioner for piglets

innovad LABORATORIES

Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Novyrate® Piglet

Gut conditioner for piglets

Scope	Good gut health, especially in young pigs, has significant health and welfare benefits. Maintaining good gut health prepares the young animal for a better productive performance. Suckling piglet diarrhea is the most common condition affecting swine, often resulting in high mortality and serious economic losses. Morbidity due to mild and chronic piglet diarrhea is an economic concern because of piglet weight loss and the risk of permanent intestinal damage. The use of natural ingredients with synergistic functions of herbal extracts and organic acids has been shown to support gut integrity and intestinal health in young animals. In combination with proper husbandry and microclimate management, feed additives can give support for a long term strategy in optimizing productivity.
Description	Complementary feed – Nutraceutical solution. A unique gut conditioner to prevent and hasten relief from diarrhea.
Components	Esters of butyric and lauric acid, probiotics, essential oils and plant extracts, medium chain fatty acids, flavouring compounds, emulsifier and carrier.
Physical & Technical Specifications	**Physical appearance** : Paste **Colour** : Brown **Enterococcus faecium (NCIMB 10415)** : $17{,}5*10^6$ CFU/g **Short chain fatty acids (C4)** : 18,30 % **Medium chain fatty acids (C8-C10-C12)** : 8 % **Crude ash** : 34,70 % **Sodium (Na)** : 2 % **Moisture (KF)** : Max. 7,50 % **Colour change or variation does not affect performance.**
Application & Dosage	Administer to piglets with signs of digestive upset or diarrhea. Use as prevention during critical periods like weaning and feeding transition. Administer daily 3-6 ml per piglet for 1-3 consecutive days. • Before administering, make sure the piglet's mouth contains no feed. • Place the tube on the nipple of the dispenser. • Insert the tube into the piglet's mouth, preferably on the back of the tongue. • Depress the head of the pump completely once or twice: 1 pump = 3 ml. • Close the dispenser with the cover after use; remaining paste may be used on following days until emptied. Before use or extension of use, contact your nutritionist for specific advice.
Packaging	High quality 100 or 250 ml airless dispenser with cover and plastic tube for easy application. Preset volume of the dispenser is 3 ml per pump. 6 dispensers are packed in a cardboard box.
Shelf Life	12 months when stored in a dry environment at room temperature of 20-25°C, out of direct sunlight in unopened packing. If stored at cooler temperature, put the dispenser in luke warm water before use for easy handling.
Item Reference	**10569**

Efficient Protection

Novyrate® Calf

Gut conditioner for calves

The profitability of dairy farms has been put under pressure due to volatile milk prices and increased feed costs. For a long time, the importance of raising a calf was underestimated. However, for some years the value of a heifer with the calving age of 24-27 months and a high lifetime performance are undisputed. The main challenge with growing calves is the occurrence of diarrhea. Antibiotic treatment does not always cure but puts pressure on the natural defense system. Novyrate® Calf has been developed as a gut conditionner to strengthen the innate immune system for a calf's long term development.

Pathophysiology of diarrhea

Viral infections are caused by three mechanisms:

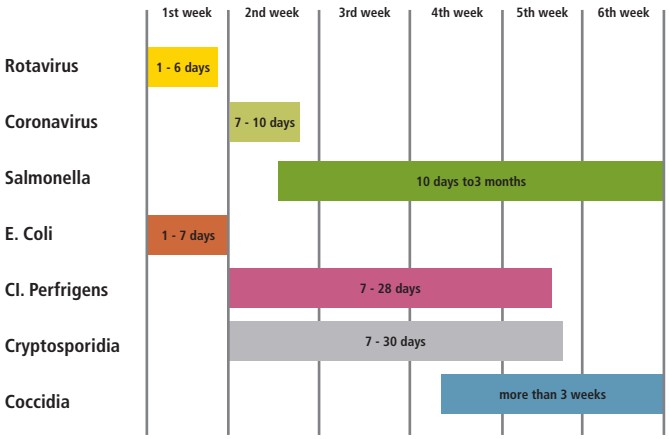
- Microvilli lose part of their functionality. This reduces the disaccharidase activity in the gut, followed by increased osmotic pressure due to non-absorbed lactose.
- The area of microvilli is reduced, and consequently the potential of absorption too. A shortage of nutrients may occur, followed by growth retardation.
- Irritation of crypt cells hinder the recovery of damaged microvilli. Gut bleeding may occur.

Pathogenesis of bacterial infections may partially differ from viral infection:

- With bacterial infections toxins are released in the gut or in the tissue.
- Mucin production may be blocked, reduced or increased. This effects the release of enzymes and the efficiency of digestion. Fermentation processes in different gut sections do not fit any longer.
- Release of fluids to the gut will change osmotic conditions and important electrolytes are lost.

Appearance of infections

Calves are threatened by infections over the whole rearing period. Depending on the pathogen, diarrhea occurs at different weeks of life. Often, infections are not treated because antibiotics do not work against viruses or bacterial infections are overseen. Antibiotic treatment can be very efficient if it fits the target bacterium and if dosed in the right quantity. Unfortunately, all antibiotic treatments influence the natural microflora dramatically. The natural gut defense system is affected for several weeks or months thereafter. The initial step of viral and bacterial protection is a strong innate defense system.



Efficient Protection

Novyrate® Calf

Gut conditioner for calves

With an understanding of the pathophysiology of diarrhea, Innovad® Laboratories developed an oral paste that strengthens the barrier function, treats diarrhea and supports faster recovery.

Novyrate® Calf

Is a unique gut conditioner to prevent and hasten relief from diarrhea. Gut health management re-directs available energy and protein from inflammation processes to growth and rumen development.

Every single dose will supply essential active components:

Natural anti-bacterial agents

- Organic acids for **antibacterial action**.
- Synergy with MCFA, for enhanced bacterial cell wall permeability and increased pathogens killing action.
- **Villi proliferation** and faster recovery.

Herb extracts blend

- Polyphenols that **protect the enterocytes** from further damage.
- Essential oils that **reduce inflammation and hypersecretion** of gut.
- Active ingredients that support **clearance of endotoxin** through the liver, thus faster recovery from fever and inappetence.

Adsorptive ingredients

- **Exotoxin adsorption** to prevent further villi damage and stop enteric overstimulation.
- **Endotoxin adsorption** to prevent absorption into the body.

Energy

- Highly absorbable and immediately metabolisable energy sources that give needed energy in periods of low feed intake.

To effectively rescue the animal from the negative effects of diarrhea, Novyrate® Calf was formulated by Innovad® Laboratories to address the different pathophysiology of diarrhea.

Dosage and application:

- Administer to calves with signs of digestive upset or diarrhea. Use as prevention during critical periods like weaning and feeding transition.
- Administer daily up to 15ml per calf for 2-3 consecutive days, until recovery.
- Before use or extension of use, contact your nutritionist for specific advice.

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Product Data Sheet

Water Hygiene | Enhance Productivity | Natural Solutions | Efficient Protection

Novyrate® Calf

Gut conditioner for calves

Scope	Digestive problems are common in calves, lambs and kids between birth and weaning. Calf scours or diarrhea can be caused by overfeeding, milk or by bacterial, viral, or protozoal infections. Scouring calves can lose 10 to 12% of their body weight in water losses. These imbalances must be corrected quickly or death can result. The use of natural ingredients with synergistic functions of herbal extracts, and organic acids has been shown to support gut integrity and intestinal health in young animals. In combination with proper cow-calf management, feed additives can support the animal in order to limit 'sick days' and achieve target weight.
Description	Complementary feed – Nutraceutical solution. A unique gut conditioner to prevent and hasten relief from diarrhea.
Components	Esters of butyric and lauric acid, probiotics, essential oils and plant extracts, medium chain fatty acids, flavouring compounds, emulsifier and carrier.
Physical & Technical Specifications	**Physical appearance** : Paste **Colour** : Brown **Enterococcus faecium (NCIMB 10415)** : $17,5*10^6$ CFU/g **Short chain fatty acids (C4)** : 18,30 % **Medium chain fatty acids (C8-C10-C12)** : 8 % **Crude ash** : 34,70 % **Sodium (Na)** : 2 % **Moisture (KF)** : Max. 7,50 % **Colour change or variation does not affect performance.**
Application & Dosage	Administer to calves with signs of digestive upset or diarrhea. Use as prevention during critical periods like weaning and feeding transition. Administer daily up to 15ml per calf for 2-3 consecutive days, until recovery. • Before administering, make sure the calf's mouth contains no feed. • Put the knurled ring at the respective dose. • Remove the cover from the tip of the syringe. • Insert the syringe into the calf's mouth, preferably on the back of the tongue. • Depress the plunger until stopped by the knurled ring. • Replace the syringe cap after use; remaining paste may be used on following days until emptied. Before use or extension of use, contact your nutritionist for specific advice.
Packaging	High quality 60 ml (4 dosages) plastic veterinary syringe with cover and easily to handle knurled ring for measuring dose levels. 6 syringes are packed in a cardboard box.
Shelf Life	12 months when stored in a dry environment at room temperature of 20-25°C, out of direct sunlight in unopened packing. If stored at cooler temperature, put the syringe in luke warm water before use for easy handling.
Item Reference	**10568**

Nutraceutical solutions

Farm application

Drinking water

Novicid® ES L

Novion® S L

Vitalite Supplement

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Aflorin® LIVA L

Aflorin® P L

Aflorin® BF L

Novitech® Y L

Escent® L

Lumance® L

Syringes and gels

Vitalite Energy Chick

Vitalite Energy Piglet

Novyrate® Piglet

Novyrate® Calf

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