



Ultra-Gut

calcium- and sodium butyrate



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Our Ultra-Gut product line consists out of different types of calcium- and/or sodium butyrate. These products significantly boost animal health in general and gut health more specifically. A better developed animal gut optimizes nutrient uptake and enhances pathogen protection, resulting into improved animal performance, lower mortality and reduced use of antibiotics.



matrix coating technology

Proviron's Ultra-Gut product line is a matrix coated source of calcium- and/or sodium butyrate. Unprotected butyrate will be immediately absorbed in the first part of the digestive tract before reaching the lower parts of the small intestine. To ensure a gradual release throughout the small intestine, we use our special matrix coating technique. Just as important, correct coating reduces the typical unpleasant smell of butyrate.

www.proviron.com/animalhealth

Ultra-Gut



boosting animal gut health & reducing antibiotic use



At Provion we believe in creating a better world with sustainable farming, healthy animals with better performance and less antibiotic use. By developing and producing innovative products we want to contribute to this belief. Provion's animal health solutions are based on salts of butyric acid, but also on high purity monoglycerides and triglycerides.

science based working mechanism

The beneficial role of butyrate in animal nutrition is widely recognized. Calcium- and sodium butyrate is well known for enhancing animal health and performance. Different studies showed the following effects when using calcium- or sodium butyrate as a feed supplement:

- ✓ Stimulates villi growth and thereby the digestive surface
- ✓ Improves the gut barrier function
- ✓ Balances the gut microbiota
- ✓ Increases insulin sensitivity in muscle tissue
- ✓ Stimulates the animal's immune system
- ✓ Improves the antimicrobial activity
- ✓ Increases nutrient digestion and absorption

This in turn, will result in increased animal health and performance.



proven results of calcium- and sodium butyrate in poultry

Different studies showed the following benefits of using calcium- or sodium butyrate in poultry:



- Improved growth performance
 - Higher body weight
 - Increased average daily gain
 - Improved FCR
 - Reduced mortality
- Increased carcass weight and breast meat yield
- Improved persistence of lay and egg weight
- Increased egg shell thickness
- Decreased salmonella shedding
- Reduced effects of Necrotic Enteritis (NE) due to *Clostridium perfringens*
- Increased amount of lactobacilli in the gut*



coated calcium butyrate uncoated calcium butyrate



in swine

Different studies showed the following benefits of using calcium- or sodium butyrate in swine:



- Improved growth performance of pigs
 - Increased ADG and body weight
 - Improved FCR
 - Reduced mortality
- Increased colostrum quality of sows
- Decreased diarrhoea incidence of pigs
- Supports early feed intake
- Increased amount of lactobacilli in the gut*
- Lower gas emissions

* *Lactobacillus* strains have been shown to be effective against a variety of GI bacterial infections, caused by *Helicobacter pylori*, *E. coli*, *Clostridium difficile* and *Salmonella*.

product range



coated butyrates

Commercial name	Acid	Ultra-Gut	Technical name	Physical property at 20°C	Melting point (°C) (?)	Packaging (bag, bigbag)
Ultra-Gut C	C4	Pure Ca salt of butyric acid	Calcium butyrate	Powder	>300°C	50x20kg, 1x500kg
Ultra-Gut C90		Film coated Ca salt of butyric acid	Calcium butyrate 90%	Powder	>300°C	50x20kg, 1x500kg
Ultra-Gut S40*		Matrix coated Na salt of butyric acid	Sodium butyrate 40%	Micropellet	54°C	50x20kg, 40x25kg, 1x500 kg
Ultra-Gut Duo50*		Matrix coated Na and Ca salt of butyric acid	Sodium- and calcium butyrate 50%	Micropellet	54°C	50x20kg, 40x25kg, 1x500 kg
Ultra-Gut Duo70		Matrix coated Na and Ca salt of butyric acid	Sodium- and calcium butyrate 70%	Micropellet	54°C	50x20kg, 40x25kg, 1x500 kg
Ultra-Gut C80		Matrix coated Ca salt of butyric acid	Calcium butyrate 80%	Micropellet	54°C	50x20kg, 40x25kg, 1x500 kg
Ultra-Gut S80		Matrix coated Ca salt of butyric acid	Sodium butyrate 80%	Micropellet	54°C	50x20kg, 40x25kg, 1x500 kg

* under development

health concepts



Optigut

Patented feed additive

Villistar

Feed additive



Porcestin

Patented feed additive

ButriPro L

Drinking water additive



Optigut Aqua

Patented feed additive

CapriPro L

Drinking water additive



esterified fatty acids

Commercial name	Acid	pureLine	Technical name	Physical property at 20°C	Melting point (°C) (?)	Packaging
pure MP	C3	Monoglycerol ester	Monopropionin or Glycerol monopropionate	Liquid, water soluble	<-30	Bulk, IBC
pure TB	C4	Triglycerol ester	Tributyryn or Glycerol tributyrate	Liquid, water insoluble	-75	Bulk, IBC
pure TB S		Triglycerol ester on silica		Powder	n/a	40x25kg, 1x1000kg
pure MB		Monoglycerol ester	Monobutyryn or Glycerol monobutyrate	Liquid, water soluble	<-30	Bulk, IBC
pure MB S	Monoglycerol ester on silica	Powder		n/a	40x25kg, 1x1000kg	
pure 106	C6	Monoglycerol ester	Monocaproate or Glycerol monocaproate	Liquid, water insoluble above 0,1%	<-30	Bulk, IBC
pure 108	C8	Monoglycerol ester	Monocaprylin or Glycerol monocaprylate	Waxy paste	20-27	IBC
pure MC	C8- C10	Monoglycerol ester	Mix of monocapr(y)in or Mix of glycerol monocapr(y)ate	Waxy paste	30	IBC
pure MP MC	C3- C8- C10	Monoglycerol ester	Mix of monopropionin + monocapr(y)in or Mix of glycerol monopropionate + glycerol monocapr(y)ate	Liquid, water insoluble	10-15	Bulk, IBC
pure 110	C10	Monoglycerol ester	Monocaprin or Glycerol monocaprinate	Waxy paste	37	IBC
pure ML	C12	Monoglycerol ester	Monolaurin or Glycerol monolaurate	Powder	55-63	20x25kg