



**METHODO**<sup>®</sup>  
S P E C I A L F L U I D

*The Great Advantages  
of Liquid Products Pro*



*Specialities  
Acidifiers  
Vitamins*







**METHODO**<sup>®</sup>  
S P E C I A L F L U I D

## *The Great Advantages of Liquid Products Pro*

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# The Great Advantages of Liquid Products

## HANDBOOK - PRODUCT LINE

### SPECIALITIES LINE

- **CITROMIN-A**  
Controlling pathogenic bacteria and better the digestion efficiency.
- **DIGEST PRO**  
Transform feed into energy and better performances.
- **LIVER PRO**  
Liver protective action.
- **NEPHRO PRO**  
Synergy between hydration, mineral metabolism and kidney.
- **RESTART**  
Metabolic booster.
- **SALIX PRO**  
Anti-inflammatory, antidiarrheal, anti-pyretic action.
- **REVITAL**  
New solution for short and medium chain fatty acids.
- **CALD-METH**  
Highly available calcium source and vitamin D3.
- **OLIGO DRINK**  
Chelated trace elements (glyciinates).
- **REIDRO METH**  
Rehydrating substances.
- **PRO AIR**  
Improves respiration and air passage. Reduces Mucus accumulation.
- **GOLDEN GUT**  
Controlling bacteria and anti-inflammatory prevention of necrotic enteritis.

### ACIDIFIERS LINE

- **METHACID OPTIMIX**  
Acidifiers consisting of Formic, Propionic and Citric acid.
- **METHO PRO**  
Acidifiers consisting of Formic and Propionic acid.
- **METHACID PRO**  
Acidifiers consisting of Acetic Citric, Lactic, Phosphoric, Formic, Propionic and Monodiglycerides of butyric acid

### VITAMINS LINE

- **VITA OMNI**  
Premix consisting of liposoluble Vitamins (A, D<sub>3</sub>, E e K<sub>3</sub>) and vitamins of B group (B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, B<sub>12</sub>, PP, Pantothenic, Folic) Betaine.
- **VITAMETH REPRO**  
Premix consisting of liposoluble Vitamins (A, D<sub>3</sub>, E e K<sub>3</sub>) and vitamins of B group (B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, B<sub>12</sub>, Folic acid) and Beta Carotene.
- **VITAMETH SEL- E**  
Premix consisting of Vitamin E and Selenium.
- **VITAMETH CARNI - B**  
Premix consisting of vitamins of B group (B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, B<sub>12</sub>, PP, Choline, Pantothenic acid), Glicyne and Carnitine.
- **VITAMETH ADE**  
Premix consisting of Vitamin A, Vitamin D<sub>3</sub> and Vitamin E



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## HANDBOOK - POULTRY

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- **VITA OMNI + VITAMETH SEL - E**

Apply at the arrival of chicks in the farm for the first 5 days.

- **VITAMETH ADE**

Apply at 4/5 weeks of life for 6/7 days.

- **VITAMETH CARNI - B**

Apply to the pullets at 12/13 weeks.

In broilers apply just when it is performed the thinning.

Apply also after an antibiotic treatment.

- **OLIGO DRINK**

Apply in case of heat stress.

- **NEPHRO PRO**

Apply in combination with OLIGO DRINK in case of heat stress or in combination with B GROUP after an antibiotic treatment.

- **LIVER PRO**

Apply in any situation of liver stress.

- **CALD METH**

Apply in case of egg shell fragility.

- **CITROMIN-A**

Apply in presence of diarrhea.

Can be combined with NEPHRO PHYT in case of dehydration of the animals.

- **RESTART**

Apply after antibiotic treatment to have a metabolic booster.

- **SALIX PRO**

Apply as anti-inflammatory, anti-pyretic.

- **DIGEST PRO**

Apply as pre-biotic.

- **GOLDEN GUT**

Can be combined with mycomos or pre-biotics from the second week life of chickens

- **PRO AIR**

Apply during respiratory disease.

- **REVITAL**

Protection and growth of intestinal villi

# DIGEST *Pro*



The purpose of the digestive process is to transform food into energy and performances **DIGEST PRO**, thanks to a skillful combination of herbal extracts and yeast, stimulates the enzymatic and digestive activity, starting from salivation and mastication till an optimal intestinal absorption.

Efficient digestion means healthier animals, more growth, more profit.

## NATURAL ACTIVE INGREDIENTS



### Plant extract (Boldo):

The boldo leaves contain essential oils (cineolo and ascaridolo); flavonoids and alkaloids (boldin) give to the plant a general detoxifying and colagogue action that means fluidifying the bile.

Increases the secretion and decreases the viscosity.

For this reason the plant is used in seasonal treatment, as a liver protector, useful for preventing liver damage, and in mild hepatic and biliary insufficiency.



### Extract from CHICORY pulp (inuline):

- Regulates the volume of the faecal mass and the intestinal transit;
- Acidifies the faecal mass and elevates the short chain fatty acids (esp. propionic acids);
- Increases the faecal nitrogen excretion and consequently decreases kidney nitrogen excretion. High ammonia concentrations in the large intestine influence badly healthiness and disturb the activity of the cellular divisions of the intestinal walls. Inulin decreases this ammonia content of the large intestine;
- Improves absorption of minerals (Ca, Mg, etc.) in the large intestine;
- Stimulates the immune system by developing the beneficial bacteria to become the predominant genus in faeces, and consequently by reducing the pathogen bacteria.



### Yeast extract from SACCHAROMYCES CEREVISIAE

- Improves the PALATABILITY of feed.
- Improves the IMMUNE SYSTEM of animals.
- Improves the RUMEN and the INTESTINAL FLORA.
- Improves the DIGESTION PROCESS.
- Improves the OVERALL APPEARANCE of the animal, especially skin, hair and nails.

## INFORMATION

### Indications:

- Inulin contributes to the development of the positive bacterial population, in particular bifidobacteria. This process allows the control and the reduction of pathogenic bacteria such as E. Choli, Salmonelle and Clostridia
- improves absorption of minerals (Ca, Mg, etc.) in the large intestine
- stimulates the immune system
- Liverprotector
- Choeleretic

### Additives per liter:

Yeast extract from *Saccharomyces Cerevisiae*,  
Extract from chicory pulp (Inuline), Plant extract  
(Boldo)

### Excipients:

Sorbitol, Monopropylen glycol , water up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages:

Poultry: 1 liter / 1.000 liters of drinking water  
Sheep and goats: 5-10 ml/head/day  
Cattle and camel: 20-50 ml/head/day

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

### Packaging:

- **Bottle:** 1 liter
- **Tanks:** 5-10-25-200 liters

# LIVER Pro



The liver is the most important organ to indicate the wellness state of the animals.

**LIVER PRO** is a premix with potent liver protective properties and recovery capacity of damaged liver tissue.

LIVER PRO has been made with ingredients widely recognized by the scientific community for their activity. Has been formulated

## NATURAL ACTIVE INGREDIENTS



**ARTICHOKE extract:** Therapeutically, artichoke extract has been used since 14 century in medical sciences for the treatment of cholestrolemia, triglyceridemia and has hepatoprotective properties (Brand et al., 1992; Zargari, 2003). Artichoke extract has protective activity in liver.

Artichoke leaves extract (ALE) has been used, traditionally, for jaundice and liver insufficiency and it has been suggested as a harmless yet effective treatment option for hypercholesterolemia (Pittler et al., 2005).

The recent ban on antibiotics in poultry feed has served to focus much attention on alternative methods of controlling the gastrointestinal microflora, artichoke extract was suggested as alternative option for controlling gastrointestinal microflora (Kleessen et al. 2003).

*Schutz et al. (2004) reported that, the total phenolic contents of approximately 12 g/kg on a dry matter basis in artichoke pomace is a promising source of phenolic compounds that might be recovered and used as natural antioxidants or functional food ingredients.*

*Many researchers reported that the specific activity of lipase in chicks decreased during the first six days after hatching and then increased up to 21 days of age (Krogdahl and Sell, 1989; Nitsan et al., 1991 and Uni et al., 1995). In addition, several data suggested that the bile secretion into the duodenum in young chicks (less than 3 weeks of age) might be not adequate for efficient fat utilization (Carew et al., 1972 and Katongol and March, 1980). Jin et al. (1998) discussed the development of digestive system in post-hatch poultry and concluded that the increase in ME value with age are partly due to increase in dietary fat utilization.*



**Extract from CARDUS MARIANUS** (*Silybum marianum*): Silymarin is a complex of flavonolignane: silychristin, silydianin, silybin and isosilybin.

Silybin, in the form of soluble diemisuccinate, is also used in antipoison centre as an injectable treatment for *Amanita phalloides* intoxications.

*(Desplaces et al. 1975; Choppin and Desplaces 1978)*

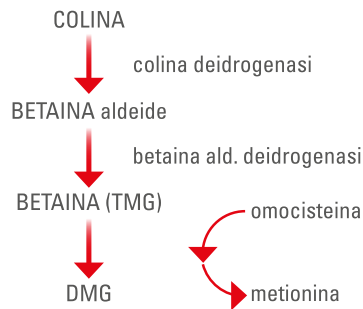
Silybin is bind with P-glicoprotein (Pgp), that can excrete drugs from cells reducing intracellular accumulation of citotoxic drugs.

*(Maitrejan, 2000)*

Silymarin have shown anti-inflammatory and anticarcinogenic properties in liver tissue acting on immune system modulation. *(Dehmlow et al. 1996; De la puerta et al. 1996; Luper 1998)*



**PERCORSO BIOCHIMICO DEL "TMG"**



**BETAINE:** betaine increases intracellular water retention and therefore protects intracellular enzymes against osmotic induced inactivation. As a methyl donor, betaine participates in the methionine cycle (mainly in the liver) and can be further used in trans methylation reactions for synthesis of essential substances like carnitine and creatine.

The regulation of cellular hydration state, and therefore cell volume, is important for maintenance of cell function and several metabolic pathways (i.e.: protein turnover, amino acid carbohydrate, etc.). Cells try to adapt to external osmotic stress by accumulating inorganic ions (Na+, K+, Cl-) and organic osmolytes (methylated amines and certain amino acids).

Several scientific publications showed the proof of principle that betaine anhydrate can be used to overcome heat stress.

*Attia et al., (2009) showed that the impact of severe heat stress could partially be overcome by adding betaine to the diet in slow growing broilers.*

*Dietary supplementation of betaine reduces the requirement for other methyl-group donors, such as methionine and choline.*

**INFORMATION**

**Indications:**

Potent hepatoprotective properties and recovery capacity of damaged liver tissue

**Additives per liter:**

Artichoke extract, Extract from Cardus Marianus (Silybum marianum), Betaine

**Excipients:**

Monopropyle glycol , water up to 1 liter

**Recommended dosage:**

Mix carefully and according to the good manufacturing procedures with the following dosages:

- Poultry: 1 liter / 1.000 liters of drinking water
- Sheep and goats: 5-10 ml/head/day
- Cattle and camel: 20-50 ml/head/day

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

**Packaging:**

**Bottle:** 1 liter

**Tanks:** 5-10-25-200 liters

# NEPHRO *Pro*



Water is the most food of every efficient breeding.

The water and trace mineral metabolism are essential for healthy animals and high production performance.

**NEPHRO PRO** is a premix for poultry formulated to exploit the synergy between hydration, mineral metabolism and kidney. A rehydrated animal with a efficient mineral metabolism is a healthy animal with prompt immune response.

## NATURAL ACTIVE INGREDIENTS



**TARAXACUM (Dandelion):** is rich in calcium, which is essential for the growth and strength of bones. It is also rich in antioxidants like vitamin C and luteolin, which protect bones from age-related damage.

Dandelions are highly diuretic in nature, so they help eliminate deposits of toxic substances in the kidneys and the urinary tract. The disinfectant properties of dandelions also inhibit microbial growth in the urinary system.



**ARCTIUM (Burdock root):** has been valued across continents for thousands of years for its ability to purify blood and cool internal heat. Internally and externally, it has potent anti-inflammatory and antibacterial effects on the human body.

Recent studies also show that burdock contains phenolic acids, quercetin and luteolin, which are all powerful, health-promoting antioxidants. Indication: stimulates kidney activity, keeping mineral balance, blood acidifier



**MENTHOL:** for the prevention and the treatment of re-spiratory disorders. Besides to be bal-samic and fluidizer, is also antispasmodic on the smooth musculature of the respiratory and digestive system.

The alcoholic constituent of peppermint oil, namely the menthol, acts as a local anesthetic and disinfectant.

Increase the water intake, menthol is useful for reducing gastric spasms, it has eupeptic action, wich improves digestion and stimulates gall bladder secretions.

**NIACINAMIDE (Vitamin PP):** is part of coenzymes NAD and NADP which are essentials for metabolism of carbohydrates and lipids with also a relaxing effect on animals (if provided in high dosage).

**Zinc:** essential for the metabolism of carbohydrates, lipids and protein, it has influence on reproductive performances and immunity.

**Glycine:** it acts as neurotransmitter in the central nervous system; exerts a moisturizing action and is a precursor of creatine.

## INFORMATION

### Indications:

- Kidney disorder due to urolithiasis
- kidney form of infectious after use of sulphonamides or antibiotic treatment, in cases of mycotoxicosis
- Against stress due to temperature changes
- After medication, vaccination, peak, laying period, changing feed and during transportation.

### Additives per liter:

Niacinamide, Zinc (zinc chelate of glycine, hydrate) 5.000 mg, Glycine, Menthol, Arctium (Burdock) dry extract, Taraxacum (Dandelion) dry extract

### Excipients:

Sodium chloride, Potassium chloride, Magnesium chloride, Monopropyle glycol, water up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages:

Poultry: 1 liter / 1.000 liters of drinking water

Sheep and goats: 5-10 ml/head/day

Cattle and camel: 20-50 ml/head/day

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

### Packaging:

**Bottle:** 1 liter

**Tanks:** 5-10-25-200 liters

# PRO Air



**PRO AIR** is a premix for poultry formulated to exploit the synergy between fatty acids and essential oils.

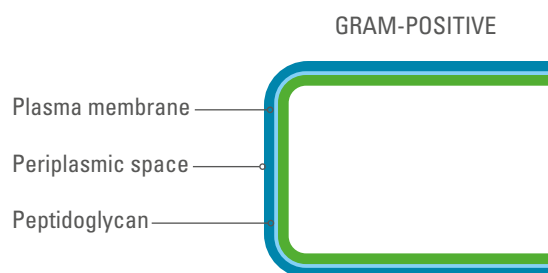
The combination of active ingredients supplies to the animals, subjected to the strong stresses of the intensive breeding, the capacity to resist to the pathogenic challenges and to maintain a better health status with better productive performances.

Each ingredient has a wide number of activity that can have positive influence on the digestive system, respiratory apparatus and also immune system.

**MCFA** are a group of medium-chain fatty acids with a number of carbon atoms ranging from C6 to C12.

They are: caproic acid, caprylic acid, capric acid, **LAURIC ACID**.

Medium chain fatty acids are commonly used in feeding, especially because of their anti-bacterial properties against Gram-positive bacteria. (Clostridia, Staphylococcus, Streptococcus).



Gram-positive bacteria it is known that, unlike Gram-negative bacteria (Enterobacteria such as Salmonella and E. Coli), they are not susceptible to the use of short chain fatty acids. Because of the "thick" cell membrane of Gram-positive bacteria, the short chain fatty acids cannot penetrate this cell membrane and kill the cells.

Research has shown that medium chain fatty acids are able to penetrate this cell membrane. Therefore lauric acid can be effective in controlling Gram-positive bacteria like Streptococci, Staphylococci and Clostridia.

## NATURAL ACTIVE INGREDIENTS



**EUCALYPTOL** and **MENTHOL** for the prevention and the treatment of respiratory disorders. Eucalyptol, being balsamic, expectorant and fluidifying, is efficiently active in maintaining free the respiratory tract.

In its activity is supported by the pairing with Menthol that, besides to be balsamic and fluidizer, is also antispasmodic on the smooth musculature of the respiratory and digestive system.

*The alcoholic constituent of peppermint oil, namely the menthol, acts as a local anesthetic and disinfectant.*

*Inhaled menthol alleviates laryngitis and bronchitis.*

*Eucalyptus oils have anti-inflammatory, antibacterial, antiviral and antifungal activities.*

*They inhibit the cyclo-oxygenase, the main enzyme in the prostaglandin pathway, and thus exhibit an anti-inflammatory property; moreover, they have a cough inhibiting effect.*





In the direction of preservation of the best animal health METHO AIR is also addressed to the protection of intestine from pathogenic agents. The essential oils **CARVACROL** and **THYMOL** synergistically operate as antiseptics and antimicrobials creating an environment suitable for the developing of the proper bacterial flora, with an immune system more efficient in an organism not run down by inflammation processes.

*Essential oils with an antibacterial character generally contain a higher percentage of phenolic compounds, such as carvacrol and thymol, main components of plants such as oregano and thyme.*



All the effects are boosted and completed by the presence in METHO AIR of **CINNAMIC ALDEHYDE**. An essential oil extracted by cinnamon, that has an antioxidative effect able to reduce the cellular stress and the level of detrimental inflammation states. Cinnamic Aldehyde has an antibacterial activity too.

*After 72 hours of incubation showed inhibitory properties on the growth of all pathogenic.*

*The colonies of S.aureus and B.cereus in the Sulgidduk containing cinnamon powder were significantly lower than the control.*

## INFORMATION

### Indications:

- Improves respiration and air passage.
- Reduces Mucus accumulation and discharge out of respiratory cavities.
- Reduces the negative effects of causing 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.

### Additives per liter:

Carvacrol, Eucalyptol, Menthol, Cinnamic Aldehyde, Thymol, Lauric Acid

### Excipients:

Monopropyle Glycol up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages:

- Broilers and Turkeys in stress condition: 200 ml /1.000 liters of drinking water per 5-6 days
  - Prevention for Broilers: 100-150 ml /1.000 liters of drinking water per 4-5 days
  - Prevention for Layers: 80-100 ml / 1.000 liters of drinking water twice daily
- Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

### Packaging:

- **Bottle:** 1 liter
- **Tanks:** 5-10-25-200 and 1.000 liters

# SALIX Pro



The inflammatory state is the cause and the symptom of numerous clinical and subclinical problems. **SALIX PRO** is a concentrate of extracts, with marked anti-inflammatory and antipyretic activity, which act in a synergistic way.

The active ingredients, totally of vegetable origin in glycolic suspension, guarantee total safety of use.

## NATURAL ACTIVE INGREDIENTS



**ECHINACEA ANGUSTIFOLIA:** the American Indians used preparations based on this plant to treat or prevent certain diseases (especially those of the respiratory tract) but also to disinfect the wounds.

They did not know that among the most interesting properties of Echinacea there was the ability to act positively on the body's immune defenses.

The properties of echinacea are given by its numerous active ingredients: alcamides, cetoalkenes, cicoric acid, polysaccharides, flavonoids and essential oil. The alcamids play an important anti-inflammatory action.

Several scientific studies have confirmed that echinacea extracts stimulate the immune system, increasing the activation of macrophages.



**BOSWELLIA SERRATA:** anti-inflammatory anti-rheumatic action comparable to NSAID by inhibition of 5-lipoxygenase, acts as  $Ca^{2+}$  antagonist reducing intestinal motility in syndromes from colic inflammation.

The effects are due to the presence of boswellic acids

*Sandern Herbon Rau : "resin extract of Boswellia S." a useful supplement to established drug therapy of chronic polyarthritis.*

*Reuslts of a double-bind pilot study - Z.Rheumatologien 1998; 57 11-16*

*Gerhardt Seifert Buvari Vogelsgang Reppges : Therapy of active chronic Crohn disease with Boswellia extracts – Z.Gastroenterologie 2001; 39: 11-17*



**SPIREA ULMARIA:** antipyretic and anti-inflammatory action due to the presence of salicylates having effect of inhibition of 15-lipoxygenase, tannins, flavonoids.

*Bourgoyne: Salycicates in Herbs. - Modern Phytotherapy.*

*1995; 1:3-6 Halkes Beukelman Kroes : In vitro immunomodulatory activity of Filipendula U. - Proceedings of NHAA International Conference; 1998 Sydney, Australia.*

*Bradley: Bournemouth: British Herbal Medicine Assciation, Scientific Committee. 1992; 158-159*



**WHITE WILLOW BARK:** has been used throughout the world as an antipyretic and analgesic.

## INFORMATION

**Indications:**

anti-inflammatory, antidiarrheal, anti-pyretic action

**Additives per liter:**

Echinacea Angustifolia fluid extract, Boswellia Serrata dry extract, Spirea Ulmaria dry extract, Salix (white willow bark) dry extract

**Excipients:**

Monopropylen glycol , water up to 1 liter

**Recommended dosage:**

Mix carefully and according to the good manufacturing procedures with the following dosages:

Poultry: 1 liter / 1.000 liters of drinking water

Sheep and goats: 5-10 ml/head/day

Cattle and camel: 20-50 ml/head/day

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

**Packaging:**

- **Bottle:** 1 liter

- **Tanks:** 5-10-25-200 liters

# REIDRO *Pro*



**REIDRO PRO** is a premix for poultry extremely palatable and tasty. It provides chelated (glycinates) trace elements with high bioavailability and rapid absorption

REIDRO PRO allows to reach a perfect equilibrium of minerals, in special for phosphorus and sulphur that are essential for an efficient enzymatic activity. The choice of high available source of these minerals assures the highest enzymatic action and a optimal protein synthesis.

Phosphorus and Sulphur are very important to:

- balance the Redox system to support mitochondrial metabolism
  - activate the vitamins B group tiamin and biotin that are essential for the metabolism of carbohydrates
  - activate the syntesis of glutatio
  - balance the insuli
  - detoxify REIDRO PRO
- Niacin (Vit. PP): is part of coenzymes NAD and NADP which are essentials for metabolism of carbohydrates and lipids with also a relaxing effect on animals (if provided in high dosage)
  - Zinc: essential for the metabolism of carbohydrates, lipids and protein, it has influence on reproductive performances and immunity
  - Glycine: it acts as neurotransmitter in the central nervous system; exerts a moisturizing action and is a precursor of creatine

## INFORMATION

### Indications:

Improves energy metabolism  
Improves the electrolyte balance  
It has anti-inflammatory properties  
It is condro-protector  
It protects from the action of free radicals

### Additives per liter:

Niacinamide 15.000 mg, Zinc chelate of glycine, hydrate ( Zinc 5.000 mg),  
L-Glycine 70.000 mg, Acetic Acid

### Excipients:

Monopropylene glycol, Sodium chloride,  
Potassium chloride, Magnesium sulphate  
Water up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures to the other components of the diets with the following dosages: 1 - 1,5 liters / 1000 liter of drinking water

Do not exceed the limits of Zinc with the use of other ingredient.

Close the bottle after the usage. Keep in a fresh and dry place, away from direct sunlight or heat sources. Do not freeze

### Packaging:

- **Bottle:** 1 liter
- **Tanks:** 5-10-25 and 200 liters

# OLIGO *Drink*



**OLIGO DRINK** is a liquid complementary feedstuff for ruminants and poultry specifically formulated to supply high bio-available and readily absorbable chelated (glycinates) trace-elements with

- Iron: is the most important constituent of hemoglobin and myoglobin and is part of important enzymes catalysis ox-redox reactions
- Copper: is part of a wide series of enzymes and is part of the myelin sheath
- Zinc: essential for the metabolism of carbohydrates, lipids and protein. It has influence on reproductive performances and immunity
- Manganese: has impact on the bone development and on the reproductive and nervous system

All the chelated trace-elements (particularly glycinates) are better and quickly absorbed than oxide or sulphate trace-elements. They do not oxidize vitamins or essential oil like oxide or sulphate trace-elements

## INFORMATION

### Indications:

- Improve the immunity system
- Improve the fertility
- Improve the animal metabolism and the enzymatic activity
- Improve the mineral metabolism
- Help animals under stress (climatic changes, heat stress, illness, birth)

### Additives per liter:

Iron chelate of glycine, hydrate (E1) 43.000 mg (Iron 10.000 mg), Copper chelate of glycine, hydrate 9.750 mg (Copper 2500 mg), Zinc chelate of glycine, hydrate (E6) 57.300 mg (Zinc 15.000 mg), Manganese chelate of glycine, hydrate (E5) 65.250 mg (Manganese 15.000 mg).

### Excipients:

Water up to 1 liter

### Recommended dosage:

- Poultry: 2-4 liters per 1.000 liters of drinking water
- Hens: 2-4 liters per 1.000 liters of drinking water before and during the mute
- Dairy cow: 20-30 ml/head/day one month before birth and 15 days after birth
- Beef cattle: 15-25 ml/head/day during the weaning and when the animals arrive in the farm. 45 days before slaughter

The product contains copper, verify that the presence in other sources doesn't exceed the limits for the single species.

Do not use in sheep and goats.

Shake before use. Close the bottle after the usage. Keep in a fresh and dry place, away from direct sunlight or heat sources.

Do not freeze.

### Packaging:

- **Bottle:** 1 liter
- **Tanks:** 5-10-25 and 200 liters

# METHACID Pro



The target of the formulation of **METHACID Pro** is to create a synergistic effect between the acids in the intestine.

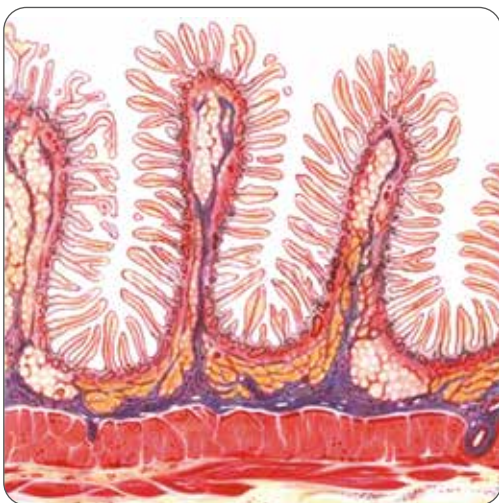
**SCFA** are a group of **short-chain fatty acids** with a number of carbon atoms ranging from C1 to C4.

They are: **Formic Acid, Acetic Acid, Propionic Acid, Butyric Acid, Lactic Acid** and **Succinic Acid**. They are saturated fatty acids.

The short-chain fatty acids diet sources are rather limited; They are produced mainly during the fermentation of fibers (unprocessed carbohydrates in the small, in particular resistant starch and pectin), operated by the bacteria in the colon.

The fiber, representing the substrate for the synthesis of short chain fatty acids, stimulates the proliferation of bacterial flora at the expense of pathogenic bacteria and their toxic metabolites.

Butyric acid is the major source of energy for the colon cells and is involved in maintaining mucous health (butyrhins deficiency leads to mucosal atrophy)



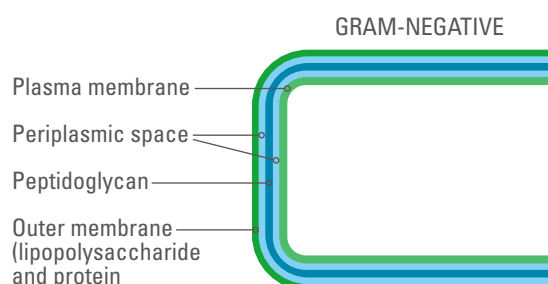
Butyric acid also has a big impact on the immune system. its anti-inflammatory mechanism is related to its ability to regulate the action of cytokines responsible for the inflammation itself.

In the intestinal tract butyric acid plays a role in regulating trans-epithelial fluids transport, in reinforcement of epithelial defense and intestinal mobility.

It stimulates the health and the growth of intestinal villus.

Short chain fatty acids (SCFA) are commonly used in feeding, especially because of their anti-bacterial properties against Gram-negative bacteria

(Salmonella, E. Coli, Campylobacter) SCFA are able to penetrate the thin layer of peptidoglycans in the cell walls of Gram-negative bacteria.



Gram-negative bacteria also have an additional outer membrane which contains lipids, and is separated from the cell wall by the peri-plasmic space.

The pectido-glycan is only 10% of cell wall.

**Formic Acid** acts indirectly reducing the pH of the feed but also in a direct way thanks to the specific antimicrobial activity of the formate.

the un-dissociated form of the acids, to cross the bacterial membrane and enter into the cell, where the dissociation happen, releasing protons and anions.

The protons decrease the cellular pH and modify the standard equilibrium. To restore the acid-base ratio, the bacterial cell is forced to use energy that is no longer available for the standard metabolism.

Anions on the other side, inhibits DNA synthesis and together with the cations are responsible for the reduction of bacterial multiplication.

## INFORMATION

### Indications:

- Prevents the proliferation of pathogenic bacteria (Salmonella, E. Coli, Campylobacter)
- Prevents the contamination of healthy ingredients when processed in contaminated plants/structures
- Behaves as acidifiers in the gastrointestinal tract
- Stimulates the animal's welfare through a trophic actions on the intestinal villus
- Stimulates the drinking water intake

### Additives per liter:

Lactic acid, Phosphoric acid, Citric acid, Formic acid, Propionic acid, Acetic acid, Mono-diglycerides of butyric acid, Glycerine

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages: 1 liter/2000-3000 liters of drinking water.

### Packaging:

- **Bottle:** 1 liter
- **Tanks:** 5-10-25-200 and 1.000 liters

# METHO Pro



**METHO-PRO** is a liquid acidifying premix, very concentrated, based on Formic acid and Propionic acid in combination with Ammonium formate.

The product has been formulated with the intent of control salmonella and pathogenic bacteria via feed and via drinking water.

**METHO-PRO** has been formulated to decrease the concentration of pathogens and to reduce the possibility of re-contamination of drinking water.

Using a mix of Formic and Phosphoric acid, it is possible to decrease the pH at lower level than with single acids.

**METHO-PRO** reduce the pH letting the formic acid free to act against pathogens.

To prevent bacterial proliferation (i.e. Salmonella) the water pH should have a pH around 4. The activity of METHO-PRO is related to ability of the un-dissociated form of the acids, to cross the bacterial membrane and enter into the cell, where the dissociation happen, releasing protons and anions.

The protons decrease the cellular pH and modify the standard equilibrium. To restore the acid-base ratio, the bacterial cell is forced to use energy that is no longer available for the standard metabolism.

Anions on the other side, inhibits DNA synthesis and together with the cations are responsible for the reduction of bacterial multiplication.

Tests have shown that METHO-PRO works well against Salmonella, E.Coli e Campylobacter both in finished feed that in raw materials.

Lowering the pH in feed and water helps the poultry to deal with the passage between the weaning and fattening period.

## INFORMATION

### Indications:

- Prevents the proliferation of pathogenic bacteria such as Salmonella, E.Coli and Campylobacter in feed and machinery
- Prevents the secondary contamination of the feed following heat treatments
- Acts as acidifier of gastro-intestinal tract of animals
- It is not corrosive for the skin and the metals
- Reduces the pollution from nitrogen and phosphates
- Easy to use and dose
- It is not dangerous

### Additives per liter:

Formic acid , Ammonium formiate, Propionic acid

### Excipients:

Monopropylene Glycol, Water up to 1 liter

### Recommended dosage:

Dose depends on contamination concentration of water, type of water and state of feed.

Maintenance Dose: 1 litre / 2000 - 3000 litres water for 4-5 days.

Curative Dose: 1 litre / 1000 litres water to maintain water pH up to 4.

### Packaging:

- **Bottle:** 1 liter
- **Tanks:** 5-10-25-200 and 1.000 liters

# VITAMETH ADE



**VITAMETH ADE** is an emulsified premix for feed to be used as integration for all animal species and categories. It provides the following active ingredients:

- **Vitamin A:** Essential for epithelium integrity, the growth and the protein anabolism and fertility
- **Vitamin D3:** it can improve the intestinal absorption rate of Calcium and Phosphorous and fix these minerals into the bones
- **Vitamin E:** protect cellular membranes and epithelia, boost the production of antibodies, acts on muscular and nervous tropism, improves immunity and fertility

## INFORMATION

### Indications:

- To be use in all cases it is necessary to add fat-soluble vitamins.
- Anti-stress supplement.
- Increases growth.
- Better egg production and stronger shells

### Additives per liter:

Vitamin A 100.000.000 UI, Vitamin D3 20.000.000 UI, Vitamin. E 20.000 mg.

### Excipients:

Monoprpylene glycol, Water up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages:

- Poultry: 1 ml/10 liters of drinking water for 3-5 consecutive days
- Sheep and goats: 0.2-0.5 ml/head/day for 5-10 consecutive days
- Cattle and camel: 1-2 ml/head/day for 7-14 consecutive days

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze..

### Packaging:

- Bottle: 1 liter
- Tanks: 5-10-25-200 liters

# VITA *Omni*



**VITA OMNI** is a premix for feed to be used as integration for all animal species and categories. It supplies the following active ingredients:

- **Vitamin A:** Essential for epithelium integrity, the growth and the protein anabolism and fertility
- **Vitamin D3:** it can modify the intestinal absorption rate of Calcium and phosphorous and fix these minerals into the bones
- **Vitamin E:** protect cellular membranes and epithelia, boost the production of antibodies, acts on muscular and nervous trophism, improves immunity and fertility
- **Vitamin K3:** Is a lipophilic vitamin that at hepatic level, allow the synthesis of prothrombin (one of the main clot factors in blood)
- **Vitamin B1:** is essential in carbohydrates' metabolism and is also part of a wide range of coenzymes
- **Vitamin B2:** is a coenzymes of several ox-redox processes and participates to the metabolism of amino-acids
- **Vitamin B6:** is one of the main component of enzymes which degrade the fatty acids and amino-acids. It is crucial in collagen and nervous central system

- **Vitamin B12:** is the coenzyme of several biochemical reactions among which are extremely important the synthesis of methionine and choline, metabolism of lipids, sugars and protein, in development and maturation of red blood cells
- **Niacinamide (Vit. PP):** is part of coenzymes NAD and NADP which are essentials for metabolism of carbohydrates and lipids with. It has also a relaxing effect on animals (if provided in high dosage)
- **Calcium D-pantothenate:** enter in the Acetyl coenzyme A, participate to the transportation of carboxylic acids, acetylation of choline and it is a precursor of cholesterol and steroidal hormones
- **Betaine:** contributes to osmotic regulation supporting the organism to cope against dehydration especially in summer time, improve the utilization of protein and energy supporting the liver functions.
- **Folic acid:** synergistically with Vitamin B1 work to the synthesis of RNA and DNA, is involved in the metabolism of amino acids and is essential for fertility

## INFORMATION

### Indications:

Dietary supplements. In phase of reproduction, heat stress, growth and fattening

### Additives per liter:

Vitamin A 15.000.000 UI, Vitamina D3 400.000 UI, Vitamin E 8.000 mg, Vitamina K3 1.000 mg, Vitamin B1 1.800 mg, Vitamin B2 1.300 mg, Vitamin B6 800 mg, Vitamin B12 12 mg, Niacinamide 12.500 mg, Betaine 10.000 mg, Calcium D-pantothenate 5.000 mg, Folic acid 250 mg.

### Excipients:

Brewery yeast from hydrolyzed *Saccharomyces Cerevisiae*, water up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages:

- Poultry: 1 liter / 4.000 liters of drinking water
- Sheep and goats: 1 ml/head/day
- Cattle and camel: 4-8 ml /head/day

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

### Packaging:

- Bottle: 1 liter
- Tanks: 5-10-25-200 liters

# VITAMETH *Carni-B*



**VITAMETH CARNI-B** is a liquid premix that can be used in all animal species and categories. It supplies the following active ingredients:

- **Vitamin B1:** is essential in carbohydrates' metabolism and is also part of a wide range of coenzymes
- **Vitamin B2:** is a coenzymes of several ox-redox processes and participates to the metabolism of amino-acids
- **Vitamin B6:** is one of the main component of enzymes which degrade the fatty acids and amino-acids. It is crucial in collagen and nervous central system
- **Vitamin B12:** is the coenzyme of several biochemical reactions among which are extremely important the synthesis of methionine and choline, metabolism of lipids, sugars and protein, in development and maturation of red blood cells
- **Niacinamide (Vit. PP):** is part of coenzymes NAD and NADP which are essentials for metabolism of carbohydrates and lipids with. It has also a relaxing effect on animals (if provided in high dosage)
- **Calcium D-pantothenate:** enter in the Acetyl coenzyme A, participate to the transportation of carboxylic acids, acetylation of choline and it is a precursor of cholesterol and steroidal hormones
- **Carnitine:** is essential to the production of energy from fat improving reproductive performances, milk production and muscular development

## INFORMATION

### Indications:

Dietary supplements. In case of deficiency of vitamin B complex. After vaccination, heat stress and changing season Better fertility.

### Additives per liter:

Vitamin B1 2.500 mg, Vitamin B2 1.250 mg, Vitamin B6 1.250 mg, Vitamin B12 15 mg, Niacinamide 12.000 mg, Calcium D-pantothenate 2.500 mg, L-Glycine 10.000 mg, L-Carnitine 5.000 mg.

### Excipients:

Brewery yeast from hydrolyzed *Saccharomyces Cerevisiae*, Monopropylene glycol, water up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages:

- Poultry: 1 liter for 2-3000 liters of drinking water
- Sheep and goats: 3-6 ml /head/day
- Cattle and camel: 15-40 ml/head/day

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

### Packaging:

- Bottle: 1 liter
- Tanks: 5-10-25-200 liters

# VITAMETH Sel-E



**VITAMETH SEL-E** is an emulsified premix for feed to be used as integration for all animal species and categories.

It supplies the following active ingredients:

- **Vitamin E:** protect cellular membranes and epithelia, boost the production of antibodies, acts on muscular and nervous trophism, improves immunity and fertility.
- **Selenium:** is one of the main components of the enzyme glutathione peroxidase that, together with Vitamin E, protects the phospholipids from ox-redox reactions

## INFORMATION

### Indications:

To support metabolism antioxidant of animals

### Additives per liter:

Vitamin. E 200.000 mg, Selenium (Sodium selenite) 200 mg

### Excipients:

Monoprpylene glycol, Water up to 1 liter

### Recommended dosage:

Mix carefully and according to the good manufacturing procedures with the following dosages:

- Poultry: 100 ml/1.000 liters of drinking water
- Sheep and goats: 2-6 ml/head/day
- Cattle and camel: 10-15 ml /head/day

Shake well before to use. Always close the packaging after use. To stock in a dry, cool and clean environment, away from direct sunlight. Do not freeze.

### Packaging:

- Bottle: 1 liter
- Tanks: 5-10-25-200 liters





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*Animal health is Liquid*







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Via A.M. Ampère, 19/21/23 - 42017 Novellara (RE) - Italy  
Tel. +39 0522 / 6566 - Fax +39 0522 / 653549 - [www.methodochemicals.com](http://www.methodochemicals.com)

