



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

*The Great Advantages  
of Liquid Products*



*Specialities*

*Vitamins*

*Acidifiers*







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

## *The Great Advantages of Liquid Products*

Handbook .....	pag. 4
Digest Meth .....	pag. 6
Citromin A .....	pag. 8
Liver Deep .....	pag. 10
Metho Air .....	pag. 12
Nephro Phit .....	pag. 14
Restart .....	pag. 16
Revital.....	pag. 18
Salix Plus .....	pag. 20
Oligo Drink .....	pag. 22
Reidro Meth.....	pag. 23
Total Safe.....	pag. 24
Entero Meth.....	pag. 26

# The Great Advantages of Liquid Products

## HANDBOOK - PRODUCT LINE

### SPECIALITIES LINE

- **CITROMIN-A**  
Controlling pathogenic bacteria and better the digestion efficiency.
- **DIGEST METH**  
Transform feed into energy and better performances.
- **LIVER DEEP**  
Liver protective action.
- **NEPHRO PHYT**  
Synergy between hydration, mineral metabolism and kidney.
- **RESTART**  
Metabolic booster.
- **SALIX PLUS**  
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.
- **METHO AIR**  
Improves respiration and air passage. Reduces Mucus accumulation.
- **GOLDEN GUT**  
Controlling bacteria and anti-inflammatory prevention of necrotic enteritis.

### 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 SeE**  
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

### ACIDIFIERS LINE

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



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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 PHYT**

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

- **LIVER DEEP**

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 PLUS**

Apply as anti-inflammatory, anti-pyretic.

- **DIGEST METH**

Apply as pre-biotic.

- **GOLDEN GUT**

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

- **METHO AIR**

Apply during respiratory disease.

- **REVITAL**

Protection and growth of intestinal villi

# DIGEST *Meth*



The purpose of the digestive process is to transform food into energy and performances **DIGEST METH**, 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

# CITROMIN-A



The specific combination of active ingredients of **CITROMIN-A** has a strong positive impact on the digestion system of the animals. The effects are not only on the quality and the safety of the drinking water, controlling the pathogenic bacteria, but also on the digestion efficiency. With Citromin-A it is possible to keep the animals in better health condition and, at the same time, to improve the production performances.

## NATURAL ACTIVE INGREDIENTS



### **C. AURANTIUM:**

In traditional Chinese medicine it is called "Chih-Shi" o "Zhi-Shi". It is used as a purifying agent to treat digestive disorders and liver disorders (*Chen JK, Chen TT. Zhi Shi (Fructus Aurantii Immaturus). Chinese Medical Herbology and Pharmacology. City of Industry, CA USA: Art of Medicine Press. 2004: 485-487*)



### **C. BERGAMIA:**

It is used as extraordinary richness of free and esterified terpenic alcohols (linalool), limonene, furocumarine (bergaptene). Its juice has energizing, toning, anti-inflammatory, and disinfectant properties.



### **C. PARADISI:**

The grapefruit seed extract (GSE) is rich in phytochemicals, as flavonoids, limonoids and naringin, with potential anti-inflammatory and antioxidant properties.



### **C. RETICULATA:**

In consideration of the quantity of fibers present in it, the mandarin is particularly indicated for the well-being of the intestine. Rich in terpenic alcohols (limonane) with antioxidant action. Stimulates the immune system



### **C. SINENSIS:**

The juice promote digestion, antispasmodic, sedative.

**Citric acid** is a well-known feed and food preservative.

It imparts an acidic/sour taste that some animals find appetizing. In addition, it can limit pathogenic colonization in the gut and improve non-specific immunity, leading to higher growth in broilers.

It is also used to enhanced calcium and phosphorus absorption in layers and broilers, resulting in better egg-shell quality and reduced use of mineral phosphates.

Citric acid is consider as preservative, mold inhibitor, flavoring agent and on average increase protein digestion in the simple stomach of animals.

When used in layer feed at times of heat stress it helps to improve egg shell quality. In broilers it helps in improving body weight and FCR and feed intake.

It is soluble in water and easily mixable and user friendly.

**Copper** (copper sulphate) Copper is one of the most critical of the essential trace minerals required by animals. It is vital in the body as a component of (or cofactor for) enzyme systems involved in iron transport and metabolism, red blood cell formation and immune function.

Copper may also influence animal health through its influence on immunity. It is involved in both cell mediated immunity (helping to eliminate invading bacteria) and humoral immunity (helping to produce antibodies).

## INFORMATION

### Indications:

- Reduces coliform present in water distribution line
- Prevents the formation of biofilm and removes it
- Increases water intake
- Improves digestion processes
- Reduces heat stress
- Higher available copper
- Improve animal welfare

### Additives per liter:

Citric Acid, copper sulphate (copper 2.500 mg), Citrus extract (*C. paradisi*, *C. aurantium*, *C. bergamia*, *C. sinensis*, *C. reticulata*)

### Excipients:

Sodium chloride, 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

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.

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.

### Packaging:

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

# LIVER *Deep*



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

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

LIVER DEEP 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.

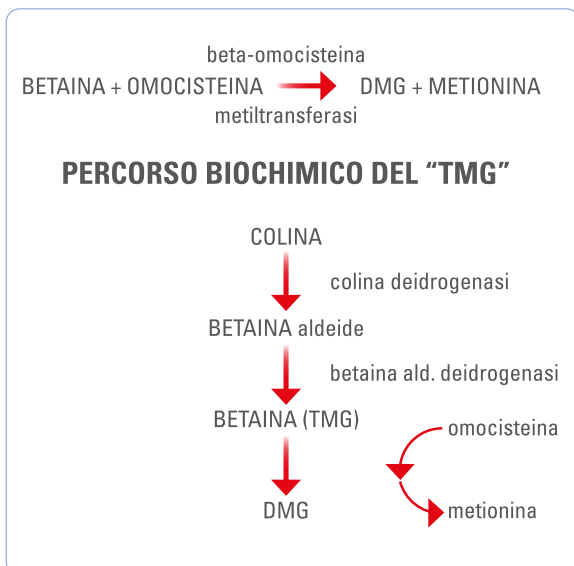
Silybin, in the form of soluble diemisuccinate, is also used in antipoison centre as an injectable treatment for *Amanita phalloides* intoxications.

*(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)*



**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<sup>+</sup>, K<sup>+</sup>, Cl<sup>-</sup>) 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

# METHOAir



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

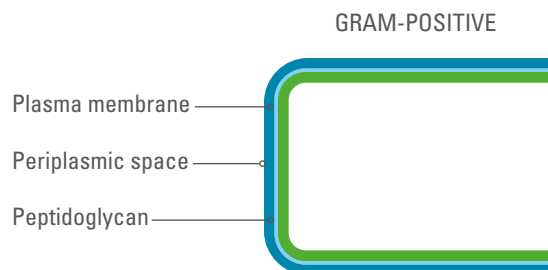
The combination of active ingredients supplies to the animals, subjected to the strong stresses of the intensive breeding, the capacity to resist to the pathogenic challenges and to maintain a better health status with better productive performances.

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

# NEPHRO *Phyt*



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 PHYT** 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

# RESTART

There are numerous causes that can generate a crisis in breeding: heat, toxins, overcrowding, vaccines.

Often it happens that, removed the causes, the animals find difficulties to recovery.

**RESTART** has been studied to give the animals a metabolic impulse in order regain their vigor and continue their productive performances also better that before the crisis

## NATURAL ACTIVE INGREDIENTS



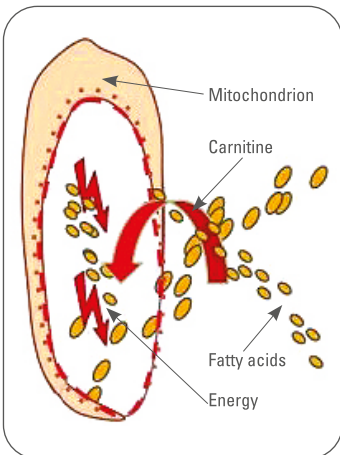
**Extract from GINSENG:** Panax ginseng trusted for over 5.000 years promoting vigor, support and improves nervous system activity, enhances hormonal secretion, improves cells absorption of sugars, improves cells absorption and metabolism of fats and increase immunity. Panax ginseng saponins are the key active components.



**Extract from GUARANÁ:** Guarana seeds are rich in guaranine, an active ingredient analogous to caffeine. This component promotes the release of two hormones, called adrenaline and noradrenaline (catecholamines), thanks to its competitive antagonist action against adenosine receptors.

Catecholamines cause the acceleration of body metabolism, of heart rate, of arterial pressure and of the number of respiratory acts (thus increasing the oxygenation of the blood).

Guarana has general restorative action, helps faster recovering after serious physical stress, energy booster, improves blood flow to muscles.



**CARNITINE:** Carnitine is required for transport of long-chain fatty acids into the matrix compartment of mitochondria from cytoplasm for subsequent oxidation by the fatty acid oxidase complex for energy production.

Carnitine also has functions in other physiological processes critical to survival, such as lipolysis, thermogenesis, ketogenesis and possibly regulation of certain aspects of nitrogen metabolism (Borum, 1985).

Carnitine was found to be beneficial in detoxification of aflatoxins (Yatim and Sachan, 2001).

Supplementation with L-carnitine may be required when metabolic rate and energy demands are increased (growth, laying periods, environmental stress, fat enriched diets...).

Although dietary supplementation does not generally improve bird performance (feed intake, growth), L-carnitine promotes the lipid redistribution in organism, mainly in broilers, by increasing intramuscular fat and by decreasing subcutaneous and abdominal fat deposits and by lowering plasma cholesterol and triglyceride concentrations. But L-carnitine does not modify the N utilization.

**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

## INFORMATION

### Indications:

Metabolic booster

### Additives per liter:

Vitamin B1, Vitamin B2, Vitamin B6, L-Carnitine base, Extract from Guaranà, Extract from Ginseng

### 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

# REVITAL



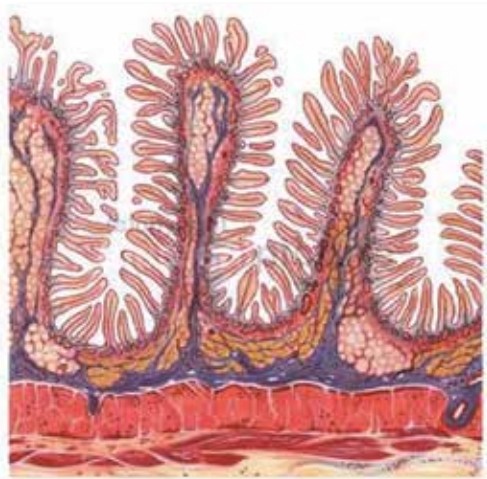
**REVITAL** is a complex of monoglycerides of Butyric Acid (C4), Lauric Acid (C12); Caprylic Acid (C8) and Capric Acid (C10); these ingredients play a key role in the digestive tract.

Their antibacterial activity allow the control of different Gram negative microorganisms like *Escherichia coli* and *Salmonella* spp., and Gram positive like *Streptococci* and *Staphylococci*. Inhibitory activity of *E.Coli* and *Clostridium* spp. proliferation, in particular during the last part of gestation and during the first part of lactation period.



**REVITAL** was tested against different\* bacterial using the broth microdilution susceptibility testing method following the test procedures indicated by CLSI M31-A3

\*= *Escherichia coli* emolítico F4+, *S. thyphirium*, *Satphylococcus aureus*, *Streptococcus suis*, *Streptococcus agalactiae*, *Staphilococcus aureus*, *Escherichia coli*, *Corinebacterium bovi*, *Streptococcus uberis*, *Mannheimia haemolytica*



### **Mono-Diglycerides Butirric Acid (C4)**

is bipolar molecule and interferes with bacterial plasma membrane: charge neutralization and hole creation antibacterial activity. Increase the intestinal villi growth with higher absorption of the nutrients components. Improves intestinal microflora and the nitrogen metabolism

### **Mono-Diglycerides Lauric Acid (C12)**

have inhibitory effects on bacteria. It boosts the immune system and improves digestion efficiency

**Free fatty acids medium and short chains (C4-C12)** Synergistic effect between Butirric Acid and Lauric Acid. Pre-biotic effect.

## INFORMATION

**Composition:** Mono-Diglycerides  
Butiric Acid (C4) 30-34%, Mono-Diglycerides  
Lauric Acid (C12) 8-10%, Free fatty acids  
10-13%, Mono- Diglycerides Caprylic  
and Capric Acid 4-6%, Glycerol free 30-35%

**Recommended dosage and administration:**

Can be add directly in feed  
or in drinking water

**Swine:** gr 100-150 per 100 kg  
of complete feed

**Ruminants:** gr 50-100 per 100 kg  
of complete feed

**Poultry:** gr 50-150 per 100 kg  
of complete feed

**Hens:** gr 100-150 per 100 kg  
of complete feed

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

**Packaging:**

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

## SCIENTIFIC SOURCES

**Applied and Environmental Microbiology, Jan. 2006, p. 522–526**

Stable Concentrated Emulsions of the 1-Monoglyceride of Capric Acid (Monocaprin) with Microbicidal Activities against the Food-Borne Bacteria *Campylobacter jejuni*, *Salmonella* spp., and *Escherichia coli* - *Halldor Thormar*, \* *Hilmar Hilmarsson*, and *Gudmundur Bergsson*

**Conference paper: 9ème Journées de la Recherche Avicole, Tours, France, 29-30 Mars, 2011**

Monobutyryn: a growth promoter and an agent for prevention and treatment of common gut infections of broiler chickens. - *Antongiovanni, M.*; *Massi, P.*; *Tosi, G.*; *Parini, M.*; *Buccioni, A.*; *Tempesta, B.*; *Minieri, S.*

**2011 Poultry Science 90: 2217–2222**

Antimicrobial activity of butyrate glycerides toward *Salmonella* Typhimurium and *Clostridium perfringens* - *H. Namkung*, \* *H. Yu*, † *J. Gong*, † and *S. Leeson* \*1

**Applied And Environmental Microbiology, Sept. 2007**

Characterization of Monolaurin Resistance in *Enterococcus faecalis*  
*Muriel Dufour*, *Janet M. Manson*,† *Philip J. Bremer*,‡ *Jean-Pierre Dufour*, *Gregory M. Cook*, and *Robin S. Simmonds*  
*British Journal of Nutrition* (2008), 100, 297–305  
Physiological concentrations of short-chain fatty acids immediately suppress colonic epithelial permeability  
- *Takuya Suzuki*, *Shoko Yoshida* and *Hiroshi*

**Animal Feed Science and Technology 162 (2010) 1-11U**

Recent advances in the use of fatty acids as supplements in pig diets: A review  
- *R. Rossi*, *G. Pastorelli*, *S. Cannata*, *C. Corino*

**Veterinari Medicina, 51, 2006 (3): 81-88**

Susceptibility of *Escherichia coli*, *Salmonella* sp. and *Clostridium perfringens* to organic acids and monolaurin - *E. Skrivanova*1, *M. Marounek*1,2, *V. Benda*3, *P. Brezina*4

# SALIX Plus



The inflammatory state is the cause and the symptom of numerous clinical and subclinical problems. **SALIX PLUS** 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

# 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

# REIDRO-Meth



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

REIDRO METH 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 METH
- 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

# TOTAL Safe



Water is the most food of every efficient breeding. The water and trace mineral metabolism are essential for healthy animals and high production performance.

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

**TOTAL SAFE** is a premix with potent liver protective properties, recovery capacity of damaged liver tissue and exploit the synergy between hydration, mineral metabolism and kidney.

## NATURAL ACTIVE INGREDIENTS



**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*)



**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

# TOTAL *Safe*

**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.

**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.

## INFORMATION

### Indications:

- Potent hepatoprotective properties and recovery capacity of damaged liver tissue. 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

### Additives per liter:

Zinc (zinc chelate of glycine, hydrate) 5.000 mg, Vitamin B1 850 mg, Vitamin B2 400 mg, Vitamin B6 450 mg, Vitamin B12 5 mg, Niacinamide 14.000 mg, , Glycine, Arctium (Burdock) dry extract, Taraxacum (Dandelion) dry extract, Extract from Cardus Marianus (Silybum marianum)

### 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

# ENTERO *Meth*



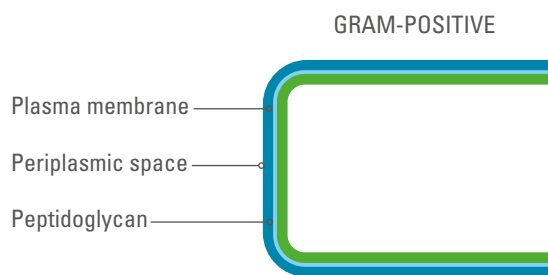
## ***Innovative solution for intestinal wellness***

**ENTERO-METH** is a premix for poultry formulated to exploit the synergy between fatty acids and essential oils. Its unique formulation combines lauric acid and selected essential oils to promote a balanced microbiota, improve digestive efficiency, and prevent intestinal disorders.

**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



### **ROSMARY CARVACROL and THYMOL:**

Thanks to their antioxidant and antimicrobial properties, these compounds promote the stability of the microbiota and combat intestinal inflammation.



### **CLOVES Eugenol:**

A powerful antioxidant, protects the intestinal mucosal mucosa from oxidative damage and pathogens.



### **CINNAMON Cinnamic Aldehyde:**

Its natural phenols improve digestion through enzyme stimulation and strengthen the intestinal barrier.



### **GARLIC - Allicin:**

A bioactive component of garlic, it offers natural antimicrobial support, promoting overall digestive health..

# ENTERO *Meth*

The combination of lauric acid and essential oils was developed to maximize the product's effectiveness. Lauric acid, thanks to its destabilizing effect on microbial membranes, amplifies the activity of the active ingredients present in the essential oils.

This synergy contributes to comprehensive intestinal health management, promoting a balanced microbiological environment resistant to external aggressions.

## INFORMATION

### Indications:

- Improves intestinal health and overall well-being of animals.
- Reduces the incidence of intestinal disorders.
- Promotes a stable and high-performance microbiota.
- Easy to use thanks to complete water solubility.
- Positively accepted by animals without altering water consumption.

### Composition:

Propylene glycol, medium-chain fatty acids

### Additives per liter:

- Cinnamaldehyde
- Carvacrol
- Thymol
- Garlic oleoresin
- Eugenol

### Recommended Dosage:

- Chickens and turkeys: 200-300 ml/1000 liters of drinking water for 5-6 days.
- Layers: 200-300 ml/1000 liters of drinking water
- Other species: 75-150 ml/1000 liters of drinking water.

Reclose the container after use.

Store in a cool, dry place away from light and heat.

Do not expose to frost.

### Packaging:

**Bottle:** 1 liter

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



FORMULATION, MANUFACTURING  
OF COMPLEMENTARY FEEDS  
AND PREMIXES TRADING  
OF FEED MATERIALS AND FEED ADDITIVES

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