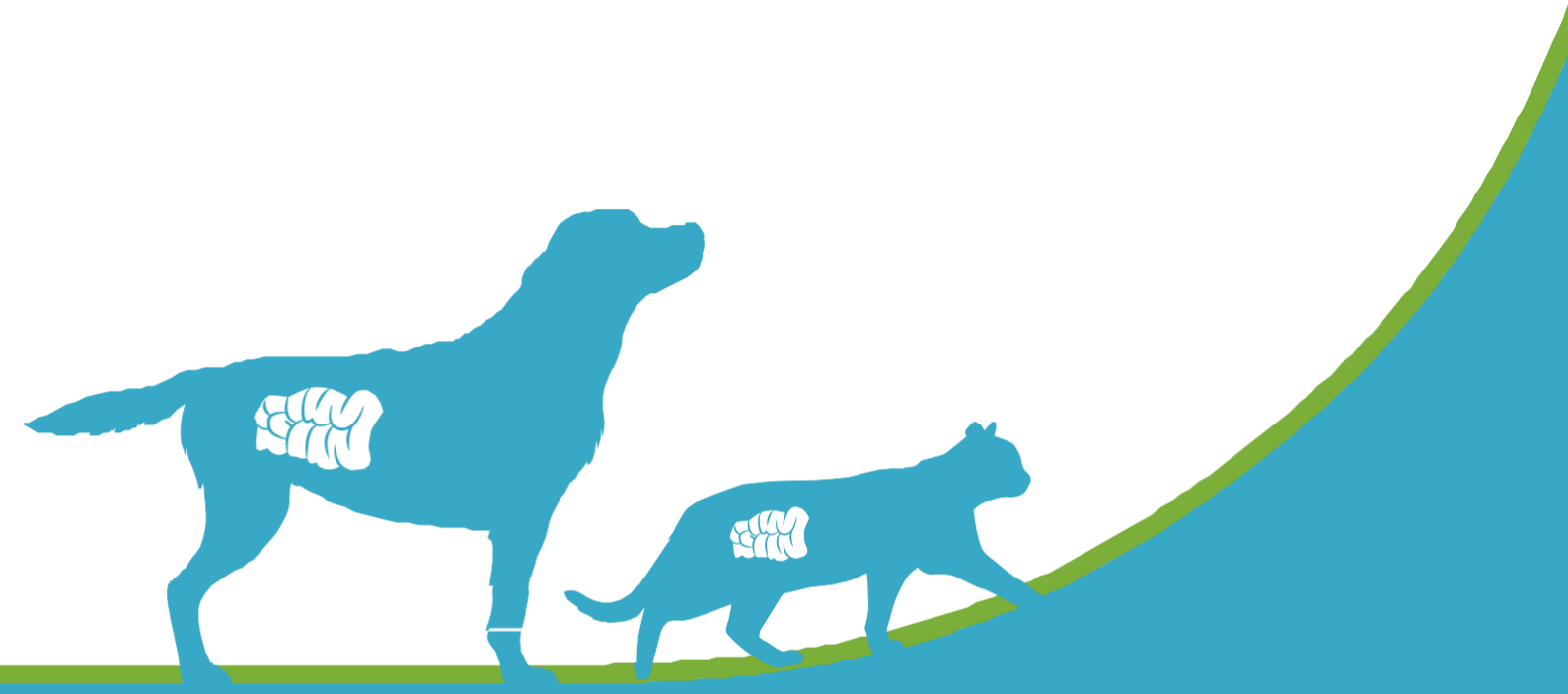
PROSOL petMOD®

INTESTINAL

COMPLEMENTARY FEED FOR DOGS AND CATS FOR PARTICULAR NUTRITIONAL PURPOSES

Reduction in acute intestinal absorption disorders
during acute diarrhoea and subsequent recovery periods

With Carob Flour, I-CARE, Inulin,
Zinc and Enterococcus faecium



THE COMPANY

Since 1974 PROSOL has been a leader in the application of the most modern biotechnological techniques for creating and manufacturing ingredients for animal nutrition.

PROSOL specialises in the selection and processing of yeast strains from which high-quality ingredients are obtained, such as **hydrolysed yeasts, Ribonucleic Acid (RNA) and Nucleotides**.

To guarantee high quality standards, there are constant strict controls of the processes.

In our laboratories, we forge innovative solutions to meet the demands of our customers all over the world.

The raw materials produced by PROSOL are sold in over 40 countries.

PROSOL is located in Madone (BG) in a 28,000 square metre area.

THE
GUARANTEE OF
PRODUCTS
MADE IN ITALY

RAW MATERIALS

YEAST

This natural raw material with ancient origins is now commonly used in animal nutrition.

A single-celled fungal organism, the yeast cell naturally provides many nutrients such as **oligo-saccharides** (glucans and mannans), **mineral salts**, **proteins** with an excellent amino acid profile, **B vitamins** and **nucleic acids**.

PROSOL continuously selects the best yeasts available from other processes, reducing the environmental impact of their disposal and, by using very technologically-advanced hydrolysis and drying processes dedicated to each product, it obtains standardised raw materials with a high nutritional value.

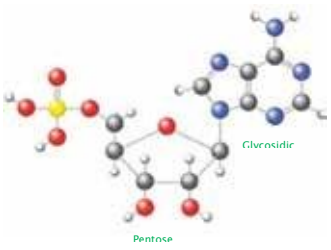
NUCLEOTIDES: petMOD®

Nucleotides are low molecular weight intracellular compounds which are involved in many biochemical processes.

petMOD® is obtained by extracting RNA from yeast cells by physical means only, and, subsequently, enzymatically hydrolyzing it until a standardised quota of 5'-monophosphate free nucleotides (> 40%) is obtained. The high concentration of 5'-monophosphate nucleotides and total nucleic acids (> 80%) leads to a greater bioavailability of the product compared to the nucleoproteins present in food.

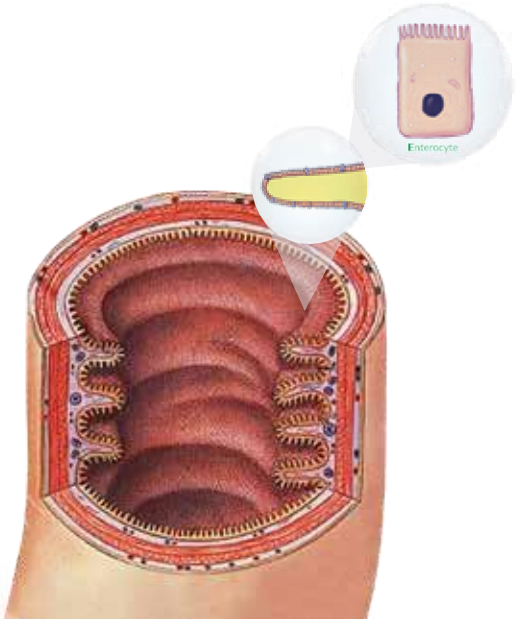
petMOD® also provides **mineral salts**, **amino acids** and **B vitamins** which are naturally present in the cytoplasm of the yeast cell.

NATURAL INGREDIENTS PRODUCED WITH LOW ENVIRONMENTAL IMPACT METHODS



THE INTESTINE

At birth, the intestine does not contain any type of flora, but in the first post-birth days, a large quantity of microorganisms appears in it. Due to the lack of an immune response, when some strains of Streptococci and Escherichia become predominant, they can create disorders and an inflammatory state. The components of the bacteria result in an effect that modulates the immune system. This effect is prevalent in the intestine, as it is estimated that 65-70% of the cells of the immune system live there.



ENTERITIS

The term **enteritis** refers to an alteration in the state of equilibrium of the system constituted by the bacterial flora and the digestive tract.

The common and distinctive symptom of enteritis is **diarrhoea.**

DIARRHOEA

This can originate from multiple causes including **infection**, **chemicals** and **pharmacology**, **parasites**, **food** (maldigestion or malabsorption) and **immunology** (intolerances and allergies).

The anamnesis must be detailed, identifying the intestinal area from which the diarrhoea comes (small or large intestine).

The pathophysiological mechanism of diarrhoea includes an increase in intestinal secretion and a simultaneous decrease in absorption capability, caused by damage to the intestinal barrier. This leads to a considerable increase in faecal mass due to the increased water content, plus a shorter transit time.

To completely restore the functionality and integrity of the balance, the administration of **mucosal protectors** is widely recommended in addition to antibiotic and food therapy.

In acute diarrhoea they are administered as symptomatic treatment in order to **reduce the diarrhoea**,

bind bacteria and **toxins** to their molecular structure and **coat the** intestinal **mucosal wall**, also creating an **antisecretory effect**.

petMOD® INTESTINAL SACHETS

petMOD® **INTESTINAL** is a complementary feed for dogs and cats formulated with an increased level of electrolytes and highly-digestible ingredients. It reduces acute intestinal absorption disorders and is a useful support during acute diarrhoea and subsequent recovery periods.

petMOD® **INTESTINAL** contains carob flour, I-CARE, inulin, zinc, bentonite and Enterococcus faecium as an additional stabilizer of the intestinal flora in dogs and cats. The convenient format in double sachets makes it easy to administer to animals.

COMPOSITION

Carob flour (Ceratonia siliqua L.) 25%, maltodextrin, yeasts (I-CARE – Kluyveromyces fragilis hydrolysed yeast) 16.6%, dextrose, inulin from chicory root 10%, sodium pyrophosphate, brewer's yeast, lupine protein flour, arabinogalactan (from larch bark) 1.66%, yeast products (petMOD® – 5'-Nucleotides) 0.83%, sodium chloride, potassium chloride, sodium salt of citric acid (sodium citrate), potassium salt of citric acid (potassium citrate), vegetable oils and fats (sunflower oil).

ADDITIVES

Nutritional additives: Compounds of trace elements: 3b603 Zinc oxide 4,000 mg/kg (Zinc 3,212 mg/kg) Zootechnical additives: Intestinal flora stabilisers: 4b1707 Enterococcus faecium DSM 10663-NCIMB 10415 (3.5x1010 CFU/kg) Technological additives: 1m558i bentonite (16,000 mg/kg), E551b colloidal silica, 1b306(i) tocopherols extracted from vegetable oils.

ANALYTICAL COMPONENTS	%
Crude protein	11.9
Crude fibres	4.0
Crude fats	0.9
Crude ash	8.7
Moisture	5.7
Potassium	0.513
Sodium	1.41
Phosphorus	1.28

COMPOSITION	3 g DOUBLE SACHET
Carob flour	750 mg
I-CARE	500 mg
Inulin	300 mg
Arabinogalactan	50 mg
Bentonite	48 mg
petM0D®	25 mg
Zinc oxide	12 mg (Zinc 9.6 mg)
Enterococcus faecium	1 x10^8 CFU

WEIGHT OF ANIMAL	RECOMMENDED DAILY RATION FOR THE INITIAL PERIOD (FIRST 2 DAYS)	RECOMMENDED DAILY RATION FOR THE FOLLOWING PERIODS (UP TO 2 WEEKS)
DOG		
Up to 10 kg	1 double sachet	½ double sachet
10 - 20 kg	2 double sachets	1 double sachet
Over 20 kg	3 double sachets	2 double sachets
CAT		
Up to 10 kg	1 double sachet	½ double sachet

COMPONENTS

NUCLEOTIDES

Numerous studies conducted on healthy newborns have shown that nucleotide supplementation reduces the risk of diarrhoea by 24.5% as it strengthens the maturation of the immune system.

Nucleotides have a direct effect on maintaining the integrity of the intestinal mucosa by increasing the activity of enzymes on the brush border (maltase and lactase).

Mixtures of nucleosides and nucleotides accelerate recovery after short periods of food deprivation and increase the intestinal flora, stimulating Bifidobacteria growth. In addition, from a further *in vivo* study, it was found that the microbial population in the faeces showed a predominance of Bifidobacteria and Lactobacilli, while there was a lower percentage of Enterobacteria.

The positive effect on the mucosa and intestinal flora suggests that nucleotides can be used as a support in intestinal disease therapies, particularly in diarrhoea.

INULIN

An oligosaccharide containing fructose extracted from chicory root. It is resistant to digestion in the stomach and the small intestine, and only minimally digested in the small intestine. They are able to stimulate Bifidobacteria growth.

Fermentation in the colon involves the formation of short-chain fatty acids (SCFA): acetate, butyrate and propionate. Butyrate is an important source of energy for the colon cells, it is metabolised by them to carbon dioxide and water, producing energy in the form of ATP. Continuous supplementation with Inulin strengthens the immune system at the intestinal level (GALT), helping to reduce the rate of intestinal infections in pets.

ARABINOGALACTAN – FIBERAID®

Arabinogalactans are a natural product derived from larch bark. The extraction takes place with a patented process that does not require the use of solvents. They are composed of two monomers: D-Galactose and L-Arabinose in a 6:1 ratio.

They have a positive action on the intestinal microbiota, interacting with the Gut Associated Lymphoid

*FIBERAID® is a registered trademark of LONZA.

Tissue (GALT), therefore helping to stimulate immune activity. They stimulate Bifidobacteria growth.

CAROB SEED FLOUR (CERATONIA SILIQUA)

Carob is the fruit of the Ceratonia siliqua tree. The gum, which derives from the thin casing of the seeds, is rich in polysaccharides and is a source of antioxidants, in particular flavonoids and vitamins E and K.

When taken in powder form, the carob plays a regulatory role in intestinal motility thanks to its high fibre content, and is used for the treatment and prophylaxis of diarrhoea in animals. It carries out a chemical action on the intestine, neutralizing the state of acidosis that is generated in diarrheal enteropathies. At the same time, it generates a mechanical effect, as Carob is able to absorb more than 50 times its weight in water as it contains pectins and cellulose and is very rich in lignin. A very voluminous colloidal gel is developed, which relaxes the intestinal walls and stimulates proper peristalsis.

ENTEROCOCCUS FAECIUM

This is a lactic bacterium that is physiologically present in the animal intestine. It has a positive effect in both cats and dogs as it increases the consistency of the stools and, by colonising the intestine, it helps to restore the eubiosis, working to stabilise the intestinal flora. In puppies, it can be an adjuvant for the immune system, in particular by strengthening the specific antibody response following vaccination.

SODIUM CHLORIDE / POTASSIUM CHLORIDE

Replenishing the electrolytes is the basis of every treatment for animals with vomiting and diarrhoea. By intervening in this way, the animal is rehydrated, reducing the risk of clinical complications and speeding up recovery.

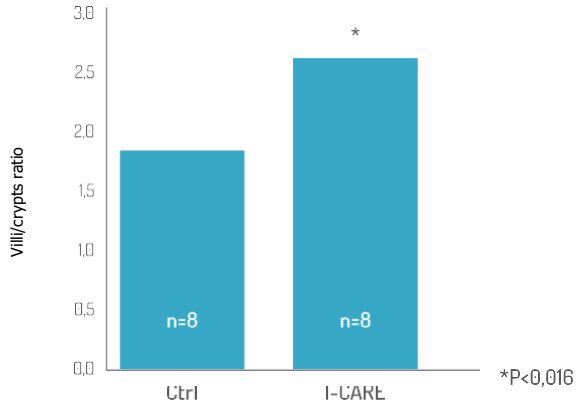
ZINC

It is unanimously recognised in the treatment of acute diarrhoea, reducing its impact and duration. Its mechanism of action involves inhibiting the toxins from pathogens in the intestine. It also carries out an antiseptic action and stimulates immunity in the intestine. In addition, it improves the absorption of water and electrolytes, the regeneration of the intestinal epithelium and the activity of the brush border enzymes.

I-CARE (KLUYVEROMYCES FRAGILIS)

Hydrolysed yeast from a selected strain, Kluyveromyces fragilis, it undergoes a special production process that allows the bioavailability of its components to be increased. Provides high protein intake with a high nutritional profile, as well as Beta-Glucans, Mannans, B vitamins and Nucleic Acids. Useful support for the wellbeing of the intestinal mucosa. Excellent palatability. In a study conducted at the University of Berlin in 2017, I-CARE showed an excellent effect on the villi/crypts ratio in the intestinal epithelium of piglets in the post-weaning period.

(See chart below)



BENTONITE

Mineral colloid able to absorb water. Thickening action.

petMOS INTESTINAL

CAROB FLOUR

BENTONITE

ZINC

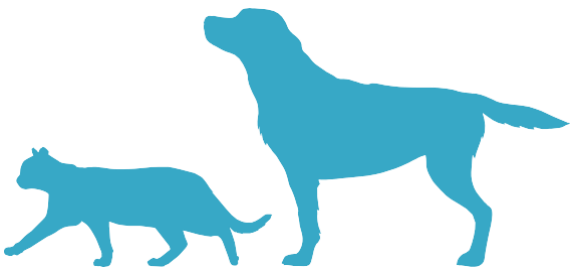
ACUTE PHASE

E.FAECIUM INULIN NUCLEOTIDES

CHRONIC PHASE MAINTENANCE

YEAST

ARABINOGALACTANS



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petMOD® INTESTINAL

METHOD FOR USE AND DAILY RATION

Administer the contents of the sachet mixed in the preferred food. Recommended period of use: 1 to 2 weeks. Complete the daily ration with the usual food.

A balanced daily ration is recommended. Always leave fresh water available. It is recommended to seek the advice of a veterinarian before use.

For further information, contact your local veterinarian.

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