



# Floraviva® 12 Cepas Pasta

Protective symbiotic, improver and recuperator of intestinal balance

Live Active Cultures - Gut Health - Healthy Immune System

Palatable Pasta

Veterinary Use

petmedica<sup>†</sup>

## Formulation

Each g contains:

|   |                         |
|---|-------------------------|
| Probiotics <sup>1</sup>                         | 5 x 10 <sup>8</sup> CFU |
| Active Organic Dry Yeast Extract                | 50 mg                   |
| β-glucans                                       | 20 mg                   |
| Fructooligosaccharides (FOS)                    | 20 mg                   |
| Mannan oligosaccharides (MOS)                   | 20 mg                   |
| Lactoferrin                                     | 20 mg                   |
| Yucca schidigera extract                        | 10 mg                   |
| Glutamic Acid                                   | 8 mg                    |
| L-Threonine                                     | 6 mg                    |
| Vitamin A (Retinol Palmitate)                   | 2,500 IU                |
| Vitamin D3 (as cholecalciferol)                 | 500 IU                  |
| Vitamin E (as alpha tocopherol acetate)         | 4 mg                    |
| Vitamin K3 (as menadione sodium bisulfite)      | 250 µg                  |
| Vitamin B1 (Thiamine hydrochloride)             | 4 mg                    |
| Vitamin B2 (Riboflavin 5 Sodium Phosphate)      | 4 mg                    |
| Vitamin B3 (Nicotinamide)                       | 10 mg                   |
| Vitamin B5 (Calcium Pantothenate)               | 15 mg                   |
| Vitamin B6 HCl (Pyridoxine)                     | 2 mg                    |
| Vitamin B7 (Biotin)                             | 20 µg                   |
| Vitamin B9 (Folic Acid)                         | 250 µg                  |
| Vitamin B12 (Cyanocobalamin)                    | 10 µg                   |
| Vitamin C (as sodium ascorbate)                 | 25 mg                   |
| Copper (copper chelate-AHM <sup>2</sup> )       | 510 µg                  |
| Zinc (zinc chelate-AHM <sup>2</sup> )           | 646 µg                  |
| Manganese (manganese chelate-AHM <sup>2</sup> ) | 525 µg                  |
| L-selenomethionine <sup>2</sup>                 | 12 µg                   |
| Methionine <sup>2</sup>                         | 4 mg                    |
| Excipients and flavorings q.s.ad.               | 1 g                     |

<sup>1</sup> From: *Bacillus subtilis*, *Bacillus licheniformis*, *Bacillus coagulans*, *Saccharomyces cerevisiae*, *Lactobacillus plantarum*, *Lactobacillus acidophilus*, *Lactobacillus rhamnosus*, *Bifidobacterium longum*, *Bifidobacterium bifidum*, *Streptococcus thermophilus*, *Enterococcus faecium* and *Aspergillus oryzae*.

<sup>2</sup> Methionine content based on metals chelated with methionine (Copper, Zinc, manganese, and selenium)

Guaranteed Analysis: Protein: not less than 15%, Fat: not less than 1%, Ash: not less than 2%, Carbohydrates: not less than 20%, Fiber: more than 0.05%, Sodium: not less than 0.02%, Chloride not less than 0.1%

## Characteristics

**Floraviva® 12 Cepas Pasta** is a unique natural nutritional symbiotic association of live microorganisms -probiotics-, together with other nutrients (prebiotics, enzymes, natural extracts, amino acids, vitamins and trace elements) that help digestion and feed efficiency, as well as support the immune system. The combination of probiotic and prebiotic is called a symbiotic.

**Floraviva® 12 Cepas Pasta** acts as a stabilizer of the intestinal microbiota and normalizes digestive/intestinal function in cases of diarrhea caused by food intolerance, digestive disorders, infections or stressful situations. Such situations can unbalance the intestinal microbiota, which is an important defense barrier in the intestine. Diarrhea is one of the main symptoms of intestinal disorders, and can quickly lead to states of dehydration, mainly in low-weight animals.

**Floraviva® 12 Cepas Pasta** is developed to protect intestinal structure and functionality, support the immune system, improve liver function and general health. The digestive local immune system is a vital first line of defense against pathogens. A healthy intestinal wall is an important barrier against infectious agents.

Additionally, probiotics have been shown to change intestinal microbial dynamics and ratios in elderly dogs (towards a composition of a young animal), increasing beneficial bacteria and decreasing potentially harmful bacteria, so supportive therapy with **Floraviva® 12 Cepas Pasta** could improve the health and immunity of the elderly host, by regulating the secretion of antibodies and cytokines; by regulating the intestinal microbiota.

## Mechanism of action

### Probiotics

They are live cultures of harmless bacteria or yeast species that balance the intestinal microbiota for the benefit of the animal. They are beneficial bacteria naturally present in the intestines. By jointly administering the bacterium together with its specific substrate, the beneficial effect of the probiotic is enhanced, since it increases its viability. The implicated mechanisms of action include induction at pH below 4, inhibition of pathogenic bacterial growth, lactic acid production, decreased intestinal permeability, increased lactase activity, competitive effect on other pathogenic bacteria, decreased rotavirus clearance time, increased production of helper T lymphocytes, and increased secretory immunoglobulin A.

*Bacillus* spp. probiotics, being spore-forming, are able to survive heat administration and offer their benefits through oxygen consumption in the digestive tract and through the production of certain enzymes such as catalase and subtilisin, which results in a suitable environment for beneficial microorganisms, such as *Lactobacillus* spp. *Saccharomyces cerevisiae*, also known as brewer's yeast, helps maintain the acidity balance in the intestine, providing a healthy and habitable environment for the microbiota.

Bacteria of the genus *Lactobacillus* spp. and *Bifidobacterium* spp. are lactic acid-producing bacteria with a wide variety of benefits including a barrier function against the penetration of pathogenic bacteria (restoring the balance), improving your intestinal health (evidenced through the improvement of your stools) and restoring digestive functions at a physiological level (assisting in the proper digestion of food).

*Enterococcus faecium* is a probiotic that promotes the competitive exclusion mechanism, fighting the overgrowth of pathogenic microorganisms that cause diarrhea in companion animals. Through competitive exclusion, it prevents pathogenic microorganisms from remaining in the intestine and obtaining nutrients, thus recovering the normal intestinal flora. The enzymes produced by *Aspergillus oryzae* help break down starch and promote digestion.

### Prebiotics

Organic dry yeast is rich in glucomannans (GM) and mannan-oligosaccharides (MOS) which inactivate mycotoxins and prevent damage to the gut. The main effects of its supplementation are the stimulation of microvilli disaccharidases, the antiadhesive effect against pathogens, the stimulation of non-specific immunity, the inhibition of toxic action and the antagonistic effect against pathogenic microorganisms. On the other hand, the enzymes, minerals, vitamins and other nutrients or growth factors produced by yeasts induce beneficial responses in animal production.

β-Glucans represent a specific substrate for beneficial bacteria, and improve their viability against pathogenic microorganisms. They are also known as immunomodulators, since when they come into contact with phagocytic cells they stimulate the production of cytokines, initiating a chain reaction that improves the efficacy of the immune response. *Fructooligosaccharides* (FOS) act as a specific substrate for beneficial microbiota in the large intestine, improving the overall health of the gastrointestinal tract. FOS have also been recommended to prevent intestinal infections caused by some yeasts such as *Candida albicans*. Several studies have found that FOS and inulin promote calcium absorption in both human and animal intestines. The intestinal microflora in the final portion of the intestine is capable of fermenting FOS, which contributes to lowering the pH. Calcium is more soluble in an acid medium, and therefore a greater amount of it is released from food and is available for absorption.

### Lactoferrin

It is a biological enzyme produced naturally in the animal organism, inhibitor of the growth of pathogenic germs. It is a protein present in some secretions and is a component of the specific neutrophil granules that is released when these cells are activated (by enteropathogenic agents) in intestinal inflammatory processes.

### Yucca schidigera extract

It is a source of steroidal saponin (urease inhibitor) that controls the accumulation of NH<sub>3</sub> (ammonia) and reduces odor in excretions. Improves and reduces the intensity of fecal aroma and decreases the concentration of hydrogen sulfide in flatulence. It has a glycoprotein fraction that binds to ammonia, preventing it from volatilizing and producing odor. Thus, it reduces flatulence and fecal odor.

### Amino acids

Glutamine (interconvertible from glutamic acid) is not recognized as an essential amino acid, however it may conditionally become essential in gastrointestinal disorders and under stress. Its primary role in rapidly dividing cells - such as those of the gastrointestinal tract and the immune system (lymphocytes, macrophages and thymocytes) - is well known. Therefore, glutamine is essential since it participates in the processes of regeneration and healing of the mucosal lining of the small intestine. It is also responsible for maintaining IgA-secreting cells in the intestinal mucosa, so an adequate supply is required to guarantee the integrity of the intestinal mucosal barrier. In case of an immune response, glutamine is vital for the synthesis of cytokines; proteins secreted by immune system cells to stabilize both the duration and intensity of the response against foreign organisms. A glutamine deficiency results in atrophy of the intestinal villi and compromised mucosal barrier, which can ultimately lead to bacterial colonization and sepsis. The enzymes of the cells of the epithelial border decrease their activity, making the digestive process much less efficient.

During stress or trauma, glutamine synthesis is unable to match the increased requirement and metabolism by the gastrointestinal tract. Therefore, glutamine has been described as a "conditionally essential amino acid". This increased demand -and concurrent poor supply- in trauma patients can lead to poor functioning of the intestinal mucosa and a consequent bacterial colonization and/or systemic infection. It is also a carbon source for gluconeogenesis and the Krebs cycle in some cells such as enterocytes. On the other hand, glutamine is involved in the osmotic regulation of the cellular hydration state; when the cell is dehydrated there is a tendency to catabolism, when the cell is well hydrated catabolism decreases; they are intracellular signals, mainly related to glutamine. Finally, the production of this important amino acid decreases with age.

Threonine is very important for the normal physiology of the digestive tract as it is found in high concentrations in the intestinal tract. One of its most important functions is digestion and immunity. The mucus, which is the secretion produced by the gastrointestinal tract, is composed of mucins (5%), which are high molecular weight glycoproteins especially rich in threonine. It is estimated that more than 50% of the threonine consumed is used at the intestinal level for maintenance functions, being used mainly for the formation of mucin. In addition, its importance is also attributed to the immune system, since high concentrations of antibodies have been described. If there is threonine limitation, protein synthesis ceases, thus limiting the growth of the animals. Threonine is an essential amino acid basic to a large number of biological functions that helps the cells of the intestine to produce the protective intestinal lining that is often lost.

### Vitamins

Vitamin A and B complex vitamins help maintain normal mucous membranes; Thus, the functioning of the intestinal epithelium can be improved and overall intestinal health can be improved. The B complex is also important for the correct metabolism of enterocytes and cells of the immune system. Biotin is not synthesized, so its contribution is essential for enterocyte cell reproduction (tissue renewal), carbohydrate, lipid, and amino acid metabolism. Pantothenic acid plays an important role in the digestion of proteins, carbohydrates, and fats. Vitamin D3 has anti-inflammatory effects, improving the functioning of the epithelial barrier and, in turn, modulating the intestinal flora. Vitamin E protects intestinal cells -together with vitamin C- from stress.

### Minerals

The minerals in **Floraviva® 12 Cepas Pasta** are chelated minerals. A chelate is an organic molecule that incorporates in its structure an inorganic mineral with a very strong bond between the two that resists passage through the digestive system, facilitates its absorption and prevents it from interacting with other minerals that could hinder its correct absorption. Copper acts as a cofactor in numerous enzymatic reactions at the intestinal level, there is an increase in losses in patients with profuse diarrhoea. Zinc has a triple action on energy metabolism, immune cell function and mucous membrane integrity. It improves the functioning of the epithelial barrier and helps the absorption and digestion of carbohydrates and proteins from the diet. Its deficiency can inhibit the secretion of gastric acid. It can stimulate more than 300 enzymatic functions, including the conversion of diet to fatty acids and energy. Selenium participates in proper pancreatic function and lipid absorption, it is a critical nutritional factor for the immune system, it is necessary for the normal functioning of the thyroid gland; joints, skin and coat, immune resistance and has antioxidant and anticancer properties.

### Target Species

Dogs and cats.

### Indications of use

Auxiliary in the reconstitution and stabilization of the intestinal microbiota and physiological digestion, as well as improving immunity and protecting the intestinal structure and functionality in cases of:

- Diarrhea or digestive disorders in general, poor fecal quality (soft stools).
- Acute enteritis
- Allergies or intolerance to food.
- Poor fecal quality, flatulence.
- Antibiotic, chemotherapy or antiparasitic therapy.
- Birth and/or weaning, growing young animals.
- Stress conditions: postoperative, childbirth, excessive heat or cold, travel, vaccination, heat, exhibitions, mating.
- Infectious diseases (parasitic, viral or bacterial). Strengthens the immune system.
- Changes in diet or alterations in the type of food.
- Poisoning and/or poisoning.
- Old age animals.
- Intestinal dysbiosis (imbalance of the intestinal flora).
- Pancreatic problems, malabsorption syndrome and chronic liver disorders.

### Route of Administration and Dose, Considerations and Directives for its Correct Administration

It is administered orally, according to the size of the pet. Administer 1 to 2 times a day according to the following dosages:

- Puppies (up to 4 kg): 1.00 mL
- Miniature dogs (up to 8 kg): 2.00 mL
- Small dogs (8 kg to 13 kg): 3.00 mL
- Medium dogs (13 to 18 kg): 4.00 mL
- Large dogs (over 18 kg): 5.00 mL
- Kittens: 1.00 mL
- Cats: 2.00 mL

• 1 mL of product is equivalent to approximately 1.25 g

### Treatment duration

The recommended minimum administration period is 3 days, however it can be adjusted according to each special situation:

- *Diarrhea or poor fecal quality (very soft stools)*: until at least 5-7 days after the disappearance of symptoms.
- *Flatulence*: up to 10 days.
- *During drug therapy*: during the time of therapy and during the 5-7 days after. Administer 3 hours after the medication.
- *In the face of a predictable stress situation*: for 2-3 days before the stress situation, during the days that the stress situation lasts and for the following 2-3 days once it has ended.
- *In the event of an unpredictable stress situation*: during the days that the stress situation lasts and for the following 2-3 days once it has ended.
- *Change of diet*: 3 days before the beginning of the transition to the new food and during the following 5-7 days.
- *Poisoning and/or poisoning*: during the therapy time (if the animal can accept it) and during the subsequent 7 days.
- *To improve immune function*: for at least 15 days.
- *To improve the microbiota in elderly animals*: for at least 30 days.

These are only referential indications. Depending on each case, the duration of treatment will depend on the response observed and the criteria of the veterinarian.

**Floraviva® 12 Cepas Pasta** is a highly palatable paste, which makes it easy to administer. Alternatively, if applicable, it can be administered by opening the animal's mouth and placing the syringe in the deep lateral part of the mouth.

### Indications for Use



- Remove cover.
- Set the syringe dispenser to the required dose level.
- Administer orally, through one side of the mouth.

### Precautions

- Do not use as a replacement for therapeutic drugs in case of infectious diarrhea.
- An examination and consultation by a veterinarian is recommended before using this product.
- In case of accidental overdose, consult a veterinarian immediately.
- Agrovet Market S.A. is not responsible for the consequences derived from the use (of the product) other than that indicated in this insert.

### Storage

Store in the original closed container, in a cool and dry place, protected from light between 15°C and 30°C. Keep out of the reach of children and domestic animals.

### Commercial presentation

Graduated syringe x 15 mL.

Graduated syringe x 30 mL.

It is possible that not all presentations will be marketed.

**Floraviva® 12 Cepas Pasta** is a nutritional supplement for animal use, not a veterinary drug.

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