

PAW DIGESTICARE™

POWDER FOR DOGS AND CATS

PAW by Blackmores DigestiCare[™] Powder is a highly palatable, all in one blend of preand dual strain probiotics, enzymes and an antioxidant-rich fermented wholefood powder, designed to support the gut microbiome in dogs and cats on a daily basis.

FEATURES:

- Contains fibre- rich fermented wholefood powder to enhance the gastrointestinal microbiome
- Is enriched with resistant starch, enzymes and spore forming probiotics to support everyday intestinal health
- Simple daily dosing sprinkle onto dry or wet food using the 6g scoop

BENEFITS:

- Promotes the long-term health and function of the GI microbiome in dogs and cats, improving digestion and general well-being
- Aids in modulating bowel movements and improves stool quality for dogs and cats
- Together, Bacillus licheniformis and Bacillus subtilis enhance healthy gut flora, leading to a reduction in faecal odour
- Bacillus subtilis may aid in the management of chronic diarrhoea in dogs

WHEN TO RECOMMEND:

- As a daily supplement to improve the long-term health and function of the GI microbiome in dogs and cats
- For pets that tend to have a sensitive stomach or in the midst of environmental changes e.g. moving house and change in diet
- For puppies and kittens to help support their developing microbiomes



NEW MPROVED ORMULA

CONTAINS:

Stable spore - forming probiotics: *Bacillus subtilis* and *Bacillus licheniformis*

Prebiotic rich fermented

wholefoods: Naturally fermented organic whole grains and seeds along with other legumes and cereals to provide easily absorbed nutritional support

A multi-enzyme preparation:

Xylanase, cellulase, β-glucanase, protease, phytase and α-amylase **Additional prebiotic:** Resistant starch

DOSAGE:

Dog/cat weight	Daily scoop (6 g)
1 - 9.9 kg	1/2 a level scoop
10 - 19.9 kg	1 level scoop
20 - 29.9 kg	1 ¹ / ₂ level scoops
30 - 39.9 kg	2 level scoops
40 kg +	3* level scoops

*Increase by ½ level scoop for every 10 kg of additional bodyweight

Size: 150g tub (approx. 25 scoops) Shelf life: 24 months Storage: Keep below 25°C out of direct sunlight Warnings/Safety: For animal use only

EDUCATION

Bacillus probiotic species

Bacillus species have been widely used in human medicine with applications as enzyme, amino acid, and antibiotic production systems.¹ Despite their less frequent use as probiotics in dogs, *Bacillus* species have the advantage of sporulation, ensuring their viability in the midst of environmental stressors, including acidic gastric pH.²

Bacillus subtilis and Bacillus licheniformis are ubiguitously found as spores in the soil. Upon exposure to optimal nutrients and moisture, they resume their cell vegetative growth in the small intestine³. Both have been shown to possess immunomodulatory and antimicrobial activities in the gastrointestinal tract, thus favouring non-pathogenic bacteria and providing protection against toxins. Intestinal microbiota balance is ultimately enhanced, leading to an improvement in host digestive health.^{1,3} In a study by Bastos et al (2020), the inclusion of 3.66×10^7 CFU/kg of both B. subtilis and B. licheniformis in feed improved canine faecal consistency and reduced odour, through the reduction of ammonia production³.

Bacillus subtilis has also been shown to be an effective adjuvant therapy to the treatment of chronic diarrhoea in dogs, with supplementation leading to a more pronounced improvement in faecal consistency, a significant improvement in faecal odour and a reduction in the incidence of flatulence.⁴

In cats, oral administration of *Bacillus licheniformis* has been shown to have a positive effect on improving stool consistency in chronic feline diarrhoea. The probiotic also enhanced the gut microbiome by significantly increasing beneficial bacterial species and significantly decreasing *Clostridium perfringens*.¹

Exogenous enzymes

Enzymes, considered biological catalysts, are proteins that expedite the rate of chemical reactions, and are thus essential for life. Exogenous enzymes are generally classified into three categories according to the substrate on which they act. The activity of carbohydrases e.g. xylanase, β -glucanase and α -amylase are directed towards carbohydrates, whereas proteases act on protein to augment digestibility, and phytases on phytate, resulting in phosphorus release.⁵ Exogenous enzyme supplementation has been shown to increase digestibility and the bioavailability of nutrients such as starch, proteins and minerals, along with the elimination of some anti-nutritional factors.⁵

Wholefoods

Dietary fibre plays an essential role in maintaining optimal gastrointestinal health, and therefore overall systemic health.⁶ It effectively regulates normal bowel functions, improves stool quality, increases digesta viscosity and promotes the growth of commensal microbiota, amongst other key roles.^{6,7} In the colon, dietary fibres are fermented to short-chain fatty acids (SCFAs), which confer anti-inflammatory effects in the intestine.7 In addition, dietary fibre supplementation to dogs with chronic enteritis or gastroenteritis has been shown to restore microbiome diversity to a state much closer to that of healthy dogs.⁷ Whole grains, including wheat, corn, oats, barley and rye, are rich in dietary fibers, trace minerals, vitamin B and E, and bioactive compounds such as phytochemicals, lipotropes, methyl donors and antinutrients.^{6, 8} These compounds are endowed with antioxidant, anti-carcinogenic and lipotropic effects, thus having a protective effect against chronic diseases, such as obesity, diabetes, cardiovascular disease and some forms of cancers.^{6,8}

REFERENCES:

1. Lee T-W. et al. The Effects of Bacillus licheniformis—Fermented Products on the Microbiota and Clinical Presentation of Cats with Chronic Diarrhea. Animals. 2022. 12(17): 2187. https://doi.org/10.3390/ani12172187 2. Felix AP et al. Digestability and fecal characteristics of dogs fed with Bacillus subtilis in diet. Ciencia Rural. 2010. 40(10): 2169- 2173. doi:10.1590/S0103-84782010005000166 3. Bastos T.S. et al. Bacillus subtilis and Effects of action and odur in dogs. BMC Veterinary Research. 2020. 16: 116. doi: https://doi.org/10.1186/s12917-020-02321-7 4. Paap P.M. et al. Administration of Bacillus subtilis C-3102 (Calsporin*) may improve feces consistency in dogs with chronic diarrhea. Res. Opin. Anim. Vet. Sci. 2016; 6(8): 256- 260. doi: 10.20490/ROAVS/16-043 5. Lucio, B.S.V et al. Exogenous Enzymes as Zootechnical Additives in Animal Feed: A Review. Catalysts. 2021. 11(7): 851. https://doi.org/10.3390/catal11070851 6. de Godoy M.R.C et al. Alternative Dietary Fibre Sources in Companion Animal Nutrition. Nutrients. 2013; 5(8): 3099- 317. doi: 10.3390/nu5083099 7. Jackson M.I. & Jewell D.E. Balance of saccharolysis and proteolysis underpins improvements in stool quality induced by adding a fiber bundle containing bound polyphenols to either hydrolyzed meat or grain-rich foods. Gut microbes. 2019. 10(3): 298- 320. doi: 10.1080/19490976.2018.1526580 8. Di Cerbo A. et al. Functional foods in pet nutrition: focus on dogs and cats. Res Vet Sci. 2017. 112: 161-166. doi: 10.1016/j.rvsc.2017.03.020