

# CANIGEST

A complementary feedingstuff to help maintain a healthy digestive system in dogs and cats.



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EXCELLENCE IN CANINE & FELINE NUTRITION



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Gastrointestinal diseases and digestive tract upsets in dogs and cats are composed of disorders with varying and unrelated underlying causes which manifest as acute or chronic diarrhoea and, in some cases, vomiting or anorexia<sup>1</sup>. These disorders can be caused by viruses, illnesses, bacterial infections, antibiotics, toxins, unfamiliar food and parasites such as giardia (one of the most common parasites infecting cats and dogs). Stressful conditions such as weaning, moving to a new home and dietary changes are all known to affect the intestinal microflora of dogs and cats and probiotics can help to re-establish normal populations of intestinal flora.

Nutritional support is a critical part of treating digestive tract upsets<sup>1</sup>. Dietary management with CANIGEST can help maintain a healthy intestinal lining, re-establish levels of beneficial bacteria in the gut, promote normal gastrointestinal motility and reduce gastrointestinal inflammation.

## Probiotics

Probiotics are micro-organisms such as bacteria or yeasts that can be added to the food which have the function of regulating the intestinal flora balance of the host<sup>2</sup>. They have also been defined as live microbial feed supplements which beneficially affect the host animal by improving its intestinal microbial balance<sup>3</sup>.



Enterococci are one of the most prevalent bacterial inhabitants of the normal flora of the lower intestine of dogs<sup>4</sup> thereby giving a rationale for their use as a feed supplement. Enterococcus faecium SF68 (strain NCIMB 10415) is a lactic acid bacteria which can inhibit the growth and adhesion of a range of enteropathogens including enterotoxigenic escherechia coli, salmonellae, shigellae and clostridia<sup>5</sup>. Therefore, enterococcus faecium is a useful nutritional agent in antidiarrheal therapy.

In a study by Benyacoub et al. Enterococcus faecium was found to enhance long-term immune functions in young dogs. The study reported that Enterococcus faecium could improve protective immune responses against various infections during weaning as well as later stages in life<sup>6</sup>.





## Prebiotics

A prebiotic is a non-digestible food ingredient that beneficially affects the host by selectively stimulating the growth and/or activity of one or a limited number of bacteria in the colon, and thus improves host health<sup>7</sup>.

Prebiotics are beneficial to the health of the body as they act as a substrate for microflora in the large intestine, increasing overall gastrointestinal tract health. Studies have shown that supplementing prebiotics such as Fructo Oligosaccharides (FOS) and Mannan Oligosaccharides (MOS) can increase the number of friendly bacteria in the colon while reducing the population of harmful bacteria. FOS supplementation has been shown to increase the number of bifidobacteria<sup>8</sup> while MOS aids in the resistance of pathogenic colonisation<sup>9</sup>.

Research conducted by Swanson et al. reported that MOS and FOS are prebiotics likely to have a positive effect on the gut health in dogs. Supplemented in the diet of dogs they improve gut health by positively altering microbial populations, enhancing immune capacity and decreasing concentrations of putrefactive compounds. They are most beneficial to geriatric dogs, young weanling puppies or dogs under stress, all of which may have compromised immune systems or undesirable microbial communities in the gut<sup>10</sup>.

## Pectin

Pectin is a dietary fibre, with high fermentability. Microbes in the colon of the dog and cat bacterially ferment this fibre with the end products being short-chain fatty acids (SCFAs), including acetate, propionate and butyrate<sup>1</sup>. These SCFAs are a significant energy source for epithelial cells lining the gastrointestinal tract.

A review of the effects of short chain fatty acids on gut morphology and function has found that these 3 main acids stimulate colonic sodium and fluid absorption. Butyrate was additionally found to be the preferred fuel for colonic epithelial cells, accounting for about 70% of total energy consumption, while acetate was found to increase colonic blood flow<sup>11</sup>.

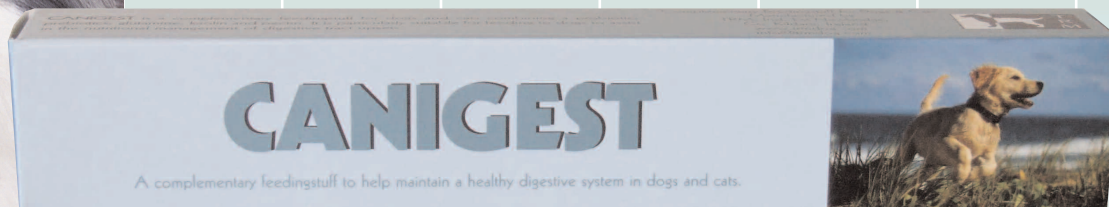
## Glutamine

Glutamine plays a role in the health of the immune system, digestive tract, and muscle cells. It acts as a mediator in the development of intestinal epithelial cells. Stress on the intestinal cells caused by digestive tract upsets can increase the need for glutamine as the body replaces the cells lining the intestinal tract.



### Dietary recommendations for dogs and cats with Gastrointestinal disease<sup>1</sup>

- Feed a highly digestible, single source, high-quality protein (rabbit, duck, lamb, venison, chicken, turkey or fish are some options). A protein source not previously utilised in the dog or cat's diet can be beneficial, as it reduces the possibility of feeding a source to which the animal may have an allergic reaction.
- Feed a single source, gluten free carbohydrate (rice, potato, tapioca or corn).
- Feed a reduced fat diet.
- Probiotics, and the prebiotics FOS and MOS stimulate the growth and activity of intestinal flora.
- The addition of omega-3 polyunsaturated fatty acids EPA and DHA has been shown to alter the eicosanoid profile of the gastrointestinal mucosa<sup>12</sup>, as well as reducing inflammation in experimental models of colitis<sup>13</sup>. Therefore increasing the quantity of omega-3 in the diet, after resolution of acute clinical symptoms, may nutritionally assist the management of canine and feline inflammatory bowel disease<sup>14</sup>.



## References

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## Feeding Instructions

Feed **CANIGEST** directly into the mouth for up to 5 days or as directed by your veterinary surgeon. It can also be added to the feed.

**Puppies and Cats:** Feed 1-2ml 2-3 times per day.

**Adult Dogs:** Feed 2-5ml 2-3 times per day.

Composition	per 1kg	per g
Rapeseed Oil, Kaolin, Fructo Oligosaccharides, Mannan Oligosaccharides, Pectin, Glutamine, Roast Meat Flavouring, Enterococcus Faecium (NCIMB 10415):	$6.6 \times 10^{11}$ cfu	$6.6 \times 10^8$ cfu

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DOGS AND CATS MANUFACTURED BY:

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