

WINPRO Summary of Published Studies using Animal Blood Proteins in Dogs

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Effects of Spray-Dried Animal Plasma on Intake and Apparent Digestibility in Dogs

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For this study, the specific effect of spray-dried animal plasma (SDAP) on food intake and nutrient digestibility was observed. In all, 22 adult beagles were used for 3 separate trials that were repeated 4 times, each for a period of 10 - 15 days.

In the first trial, dry, uncoated dog food was coated with 5% tallow, 2% commercial flavor, and 0% or 2% SDAP. Researchers observed that the dogs fed SDAP had decreased fecal output, as well as decreased dry matter in their feces. Fecal consistency did not change. In addition, the intake of nutrients was unchanged by the treatment of SDAP. However, researchers noted the digestibility of nutrients, dry matter, fat, and crude fiber were improved for dogs that ate food treated with SDAP.

For the second trial, commercially available dry dog food was coated with either 0% or 2% SDAP, with no additional flavors. As in trial 1, fecal and dry matter output were decreased for dogs consuming SDAP. Fecal consistency did not change, nor did nutrient intake. However, SDAP was again shown to improve digestibility of nutrients, dry matter, crude fiber and crude protein.

For the third trial, four diets were prepared which contained 0%, 1%, 2%, or 3% SDAP. All other factors were equal. Fecal production decreased with increasing SDAP concentration. Dry matter fecal output decreased with the addition of 1% SDAP but did not decrease thereafter. Nutrient intake was not affected by SDAP; however, digestibility of nutrients did increase. Maximal digestibility was observed at 1% or 2% SDAP, depending on the nutrient.

Overall, the research presented here showed the addition of spray-dried animal plasma to dry kibble does not negatively affect nutrient intake but does improve nutrient digestibility.

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Porcine Immunoglobulins Survival in the Intestinal Tract of Adult Dogs and Cats Fed Dry Food Kibbles Containing Spray-Dried Porcine Plasma (SDPP) or Porcine Immunoglobulin Concentrate (PIC)

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This research study whether orally administered porcine (pig) immunoglobulins or plasma can withstand the canine digestive tract. Nine adult beagles were fed one of three diets for 42 days. The experimental diets contained 10 g of spray-dried porcine plasma (SDPP) or 10 g of porcine immunoglobulin concentrate (PIC). A third control diet contained the same composition as the two experimental diets, minus SDPP or PIC.

Overall, no changes in body weight, food intake, fecal output, fecal score, or digestibility of nutrients was observed in each diet group. However, the fecal content of immunoglobulin A (IgA) was significantly reduced when food was treated with SDPP or PIC. IgA is a protective immune factor found in the intestines.

The fecal concentration of porcine immunoglobulins was significantly higher when dogs were fed PIC-coated dog food than when given SDPP-coated food or the control diet. However, analysis showed that immunoglobulins survived the digestive tract regardless of whether dogs were fed SDPP or PIC coated foods.

Ultimately, this study showed that blood proteins can survive a dog's digestive tract, and that the inclusion of these proteins reduced the fecal output of IgA.