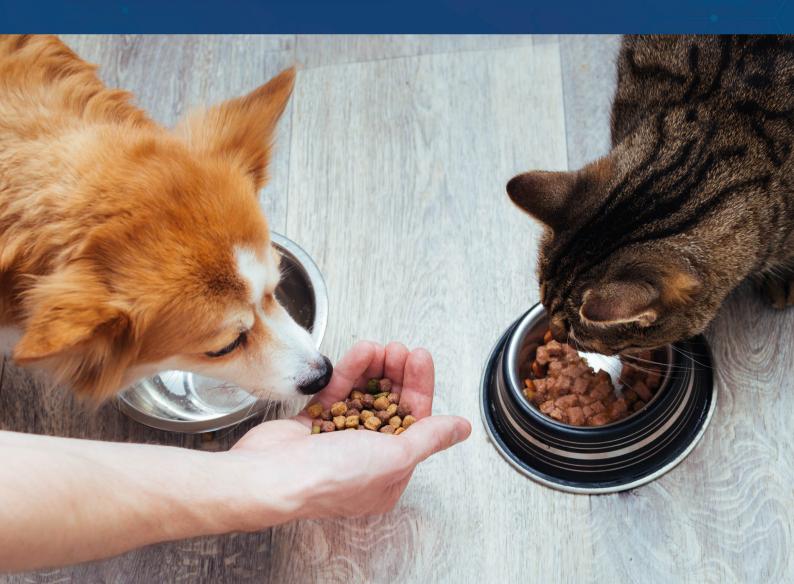




INGREDIENTS WITH SUPERIOR FUNCTIONALITY & HEALTH BENEFITS FOR PETS

WET | DRY | TREATS | SUPPLEMENTS



OUR MISSION IS TO HELP ANIMALS THRIVE THROUGH THE USE OF INNOVATIVE FUNCTIONAL PROTEINS THAT POSITIVELY IMPACT PERFORMANCE

Our story began over 40 years ago when APC scientists discovered the powerful role plasma derived functional proteins play in helping support and maintain normal immune function in baby pigs. Since that initial discovery, our scientists have seen powerful, consistent and effective results across multiple species.

APC's spray dried plasma (SDP) products are used for both processing functionality and health benefits, adding value through the unique properties that positively impact billions of animals each year.

PLASMA PERFORMANCE

Pet owners have become increasingly savvy at identifying ingredients that are beneficial for their pets. APC knows the pet food industry needs ingredients that are both functional and label friendly. Pets quickly become family members and pet parents want to feed them as such. This is part of the reason why there is a demand for high quality proteins to be added to their food and treats. Not only do plasma derived proteins satisfy customers' needs they offer many benefits to manufacturers. APC's ingredients offer a unique solution not only for formulation requirements, but also by providing unparalleled health benefits including immune support and digestive health while positively impacting muscles, joints, skin and coats with visible results.

WET, MOIST & SEMI-MOIST PETFOOD

Plasma can be used as a quality binder for traditional manufacturing benefits including making firmer chunks with fewer crumbs, improving texture and creating a gravy pets love.

- Improves water holding, gelling and emulsification
- Improves palatability
- Improves digestibility
- Allows high levels of protein in recipes with reduced
- Replaces gums and stabilizers that may cause digestive upset

DRY PETFOOD, TREATS & SUPPLEMENTS

In dry applications, plasma offers the opportunity for a different kind of functionality - supporting immune health while replacing less desirable ingredients. More than 600 published journal articles show the power of plasma and the positive impact it has on the overall well-being of animals.

- Supports immune health
- Improves digestibility
- Highly palatable
- Low ash, high protein alternative
- Helps balance calcium / phosphorus from meat meals
- As source of functional proteins in senior dogs to improve cognitive functions

SUSTAINABLE FROM THE START

With billions of people in the world today and many of them food insecure, we think it's important to maximize the value of all of our resources, including co-products of the meat industry, like blood. APC collects blood that would otherwise have little to no value and turns it into red cells and plasma. The red cells become a highly digestible protein. Plasma is specially processed to retain all of the biologically active functional proteins that help to support an animal's immune system, health and growth. By using every part of the animal, we can reduce waste - and help other animals thrive.







LABEL FRIENDLY

- · Beef or Pork Plasma
- Natural Flavors
- Hydrolyzed Proteins

Consumer research indicates one of the biggest determining factors in purchasing pet food is the amount of information included on the package and the perception of quality ingredients.

Pet food manufacturers can rely on APC's plasma derived proteins to provide flexibility in labeling to help fulfill pet owner needs.

APC's ingredients allow pet food companies to select what works best in their product lines and fit in many AAFCO categories including beef or pork plasma, natural flavor, hydrolyzed protein or meat by products.

FUNCTIONAL BENEFITS

- Immune Support
- Digestive Health
- Muscle & Joint
- Skin & Coat

Pet owners are increasingly scrutinizing pet food, treat and supplement options beyond what their furry friends get from a nutritional standpoint. Health benefits are top of mind whether feeding a newly adopted puppy or an aged companion.

APC's plasma derived ingredients offer demonstrated benefits for pets at every life stage.

Research shows that plasma helps support the immune system, digestive health, muscles and joints while also helping improve skin and coat.

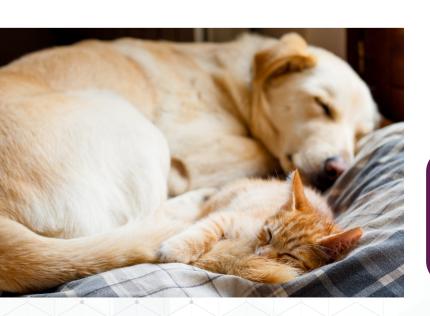
FORMULATION BENEFITS

- Extend or Replace Other Proteins
- Promote Wild, Natural Nutrition
- Improve Functionality of Formulas

Not only do pet owners want their pet food to contain quality ingredients and provide health benefits, they also care about natural nutrition and offering their pet an appealing meal or treat. This is good news for pet food companies that elect to include plasma derived ingredients in their recipes.

Plasma is a perfect replacement or extender for other, often more expensive, proteins. Using plasma means pets are getting the wild, natural nutrition they would normally consume while providing manufacturer savings.

Plasma also offers pet food manufacturers many physical functionality benefits in wet, moist and semi-moist products. Including plasma increases gel strength, water holding capacity and emulsification. Plasma also provides efficiency in the extruder and helps form tasty treats – all while increasing palatability.



Plasma offers solutions for each stage of life and is effective in minimizing

each stage of life and is effective in minimizing the effects of stressors such as diet changes, separation anxiety, gastrointestinal upset and other inflammatory events.

ABOUT APC

APC is the world's largest manufacturer of spray dried plasma. APC has manufacturing plants all around the world including Argentina, Brazil, Canada, Poland, Spain, UK (Northern Ireland and England), and the United States.

APC is a family-owned business, with over 40 years of experience in providing consistent, quality products no matter where you are in the world.

ABOUT PLASMA

Spray Dried Plasma (SDP) is a dry powder rich in functional proteins obtained from blood collected during the harvest of healthy animals destined for human consumption. The method of production involves the separation of red cells from plasma followed by the high temperatures and pressure of spray drying, resulting in a homogeneous powder that has been used in animal nutrition as a functional ingredient since the 1980s.

SDP contains a complex mixture of functional proteins including:

- Transferrin = binds iron
- Lysozyme = attacks bacteria
- Growth factors = stem cell repair
- Cytokines = anti or pro inflammatory
- IgG = binds toxins and pathogens

HOW PLASMA WORKS

Plasma has multiple actions on animals, but in simple terms, oral consumption of plasma helps the immune system respond to challenges more quickly and efficiently. The effects of plasma are systemic, meaning it affects all immune systems and has a broad and sustained effect on efficiency of the total body immune system response to stress.

PRODUCT OPTIONS

- AP 820 or AP 920 Beef or Pork Plasma
- Savorings Natural Beef or Pork Flavor
- Cravings Hydrolyzed Pork Protein

For more information, contact an APC Sales or Technical Services Representative







THE IMMUNE SYSTEM CONNECTION

Orally fed plasma has a multi-systemic effect on animals.





APCproteins.com