

# RED CELLS & PLASMA FOR AQUACULTURE



APC ingredients provide a rich source of highly digestible proteins that help to promote growth and to alleviate the effects of normal stress experienced in farmed fish environments. You can count on APC's superior quality ingredients to help you sustain your operation.

AQUA



## Spray Dried Red Cells

Spray dried red cells (SDRC) can be used as a partial replacement for fishmeal or other protein sources. SDRC improves amino acid balance and provides superior digestibility.

- Highly digestible protein: 98-99%
- High in lysine and other indispensable amino acids
- Environmentally friendly low Phosphorous content
- Improves weight gain and efficiency
- Highly soluble
- Highly palatable
- Aids feed processing of high fat pellets

## Spray Dried Plasma

Plasma is a highly digestible protein with significant benefits to the aquaculture industry. Research demonstrates plasma helps support immune and intestinal health. Plasma is especially effective when used during stressful or challenging conditions either with or without antibiotics or other medications.

Plasma offers health benefits unlike any other ingredient. Plasma helps to support immune and intestinal health, leading to improved production measures:

- Reduces mortality
- Increases weight gain
- Improves feed intake
- Improves growth
- Improves uniformity



## The most environmentally friendly and sustainable ingredients for aquaculture

By collecting blood from the meat industry, APC takes what was once considered a low value waste product with little nutritional value and turns it into ingredients that help multiple agricultural industries. Through sustainable practices, we manufacture spray dried red cells and plasma that serve as both valuable nutritional and health tools for the aquaculture industry. Using spray dried red cells and plasma helps to improve animal welfare by reducing or removing antibiotics while at the same time improving health and production efficiency and productivity.

*Spray dried plasma and red cells, help the fish feed industry to produce nutritive, efficient and safe ingredients, while helping to de-medicalize feeds and reduce the total environmental impact of the agricultural meat industry.*

## 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 proteins such as albumin, globulin, transferrin, growth factors, bioactive peptides, and other nutritional components.

## 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.



MANUFACTURING FACILITY

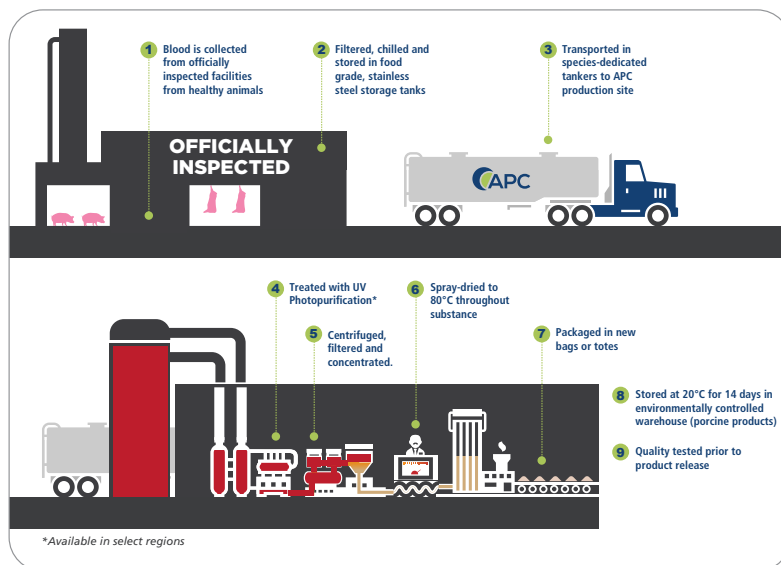


HEADQUARTERS/  
SALES OFFICE

***Our mission** is to help animals thrive through the use of innovative functional proteins that positively impact performance.*

## THE IMMUNE SYSTEM CONNECTION

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



## Biosafety of Plasma

APC takes the risk of foreign animal diseases and the safe manufacturing of our products seriously. We invest significant resources into conducting scientific trials that validate our manufacturing practices inactivate global diseases of concern.

- Healthy animals from officially inspected facilities
- Pooling testing and analysis of product
- UVC processing
- Spray drying
- Post drying heat treatment

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

