Prayon is a leading producer of purified phosphoric acid and food-grade phosphates. Our food applications laboratory enables us to meet market requirements and offer innovative products in line with the latest trends in the food industry.

Food-grade phosphates are produced using high-quality purified phosphoric acid. The Prayon Group has a global reputation for its phosphoric acid technology, jointly owned by the Office Chérifien des Phosphates (OCP) and Société Régionale d’Investissements de Wallonie (SRIW), the Group consists of more than 20 companies in more than 10 countries. It employs over 1,400 people and generates a turnover of approximately €680 million (2010).

With production facilities in Belgium (Engis and Puurs), France (Les Roches de Condrieu) and the USA (Regina, Georgia), Prayon produces a full range of purified phosphoric acids, sodium, potassium and calcium phosphates and blends mainly used in the meat, poultry, seafood, baking and dairy industries.

Food-grade purified phosphoric acid and phosphates supplied by Prayon:

- are controlled using an HACCP approach on all production lines and are ISO 22000 certified;
- meet current legal requirements;
- are kosher- and halal-certified;
- are tested and are ISO 14001, OHSAS 18001, Pareve Passover, Kosher certified; and
- are competitive and flexible.

We listen to your needs and fulfil your requirements. We are a winning team.

We achieve our goals through strong ethics and solid core values

- Customer-focused: We listen to your needs and fulfil your requirements. We are a winning team.
- People-oriented: We value the experience, competencies and professional development of our employees. We work as a cohesive and innovative team.
- Technology: We exploit the strength of the art: facilities through continuous process improvement, research and innovation.
- Quality of life: We practice Responsible Care. We believe in sustainable development. We are a winning team.

We Practise Responsible Care.

Prayon is a responsible company. We believe in sustainable development and are committed to enhancing the quality of life.

Carfosel™ blends interact in a unique way to bind water with proteins and increase meat tenderness. Treated products will maintain their juicy appearance as well as their natural nutritional properties, texture and colour.

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Food-grade phosphates perform a number of functions in processed meat and poultry products. Phosphate salts (STPP and SAPP) are the most rapidly acting phosphates on myofibrillar proteins, the water binding proteins of meat and poultry. Phosphates are not highly soluble in water so they are usually blended with more soluble inorganic phosphates, such as sodium tripolyphosphate (STPP), which is then hydrolyzed by alkaline phosphatase in the meat to the active phosphates.

For broader spectrum activity, SHMP (sodium hexametaphosphate) is used in formulations, but it is not currently recommended by Prayon as it is not as effective as the STPP/SAPP combination. Other phosphates, such as sodium pyrophosphate, are used in specific processing applications, but they are not as effective in muscle protein stabilization and fat dispersion as the STPP/SAPP combination. For applications such as frankfurters, precooked sausages, and luncheon meats, Prayon recommends SHMP and sodium carbonate, with or without citric acid, to develop and stabilize the emulsion in the meat product.

Injected and marinated meat and poultry

When the meat is cut and vacuum packed for fermentation, the soluble phosphate compound reacts with salt to reduce the water content, which favors the formation of interprotein bonds, which link muscle proteins and retain water.

Phosphates have also been shown to increase the temperature for denaturation, thus reducing color loss and losing to the end product with greater succulence and enhanced yield in the finished product. Phosphates will compensate for the reduction in the final product. Phosphates act as a stabilizer for the meat by binding water and reducing shelf-life losses.

Benefits of phosphate salts

Emulsified meat and poultry products

In emulsified meat products, phosphates, salt and moisture are added to the ground meat and are quickly heated for dispersion and protein stabilization. The hydrophilic proteins around the cold fat droplets to form an emulsion. Enzyme release is accelerated by using a phosphate and a water-soluble enzyme, such as Carfosel®. The presence of phosphates stabilizes the emulsion during smoking and results in enhanced yield.

Effects on muscle proteins

Meat and poultry change color during aging. The muscle cells’ own phosphate compound (STPP - adenosine triphosphate) quickly decomposes. As a result, pH increases, muscles contract (tiger morce) and water is expelled. Protein phosphates demonstrate comparable characteristics to the cells’ own phosphate. They act on muscles and restore uncontracted state, thereby enabling the continuation of water to be restored.

Injected and marinated meat and poultry

In comminuted meat production, phosphates, salt and ice are added to the ground meat and frozen. Phosphates help to guarantee optimal brine homogeneity and stable processing conditions. Food phosphates also contribute to an end product with greater succulence and enhanced yield in the finished product.

Injected and marinated meat and poultry

Freeze-injected, marinated and chilled meat and poultry products (Ham, marinated meat & poultry, frozen chicken and turkey, etc.)

Carbosel® Blends

Prayon’s Carfosel® product line is the result of years of research and development. Prayon’s extensive Carfosel® portfolio meets customers’ specific needs.

Carbosel® TM instant products are formulated to perform under a wide range of conditions. They provide excellent performance in extreme conditions, the end product, Carbosel® instant salts maintain their activity and in freezing tolerance to very high salt concentrations. Under stressed conditions, Carbosel® instant products, help to guarantee optimal brine homogeneity and stable processing conditions.

Emulsified meat and poultry products

Emulsified meat and poultry products (Lunchmeat, pastrami, processed sausages, chicken nuggets, etc.)

Prayon has a wide range of spray-dried STPPs with various particle size distributions, bulk densities and hydration levels. There is always a Prayon STPP to fit your specific processing needs and requirements. Prayon has a wide range of spray-dried STPPs with various particle size distributions, bulk densities and hydration levels. There is always a Prayon STPP to fit your specific processing needs and requirements.

Food phosphates for meat & poultry

Prayon's food phosphates for meat & poultry products

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