



PRAYON

# Phosphates on the table



[www.prayon.com](http://www.prayon.com)



Prayon\* is currently one of the leading producers and sellers of purified phosphoric acids as well as technical and food phosphates.

The products described in this brochure are specifically designed to be used in the food industry. They are part of an extensive range of purified phosphoric acids, ammonium, sodium, potassium and calcium phosphate salts and sodium fluorides.

Prayon's priority is to focus on clients and to make every effort to meet their needs by building long-term relationships.

Prayon's strategy of staying close to its clients has been made possible and optimised by an integrated management system\*\* involving all levels of the group.

The applications laboratory is equipped and organised in such a way that it is able to respond rapidly to market needs and offer innovative products driven by the latest food trends.

Its various production sites - optimally located in Belgium, France and the United States - bolster Prayon's dominant position in Europe and North America.

In order to guarantee quick, effective and permanent contact with clients, subsidiaries have been set up in Western Europe and a network of several dozen sales representatives stretches across five continents, thus extending the Group's involvement in the sector at an international level.

Further information and the addresses of the members of the Prayon Group are available at [www.prayon.com](http://www.prayon.com).



\* Equally owned by Office Chérifien des Phosphates (OCP) and the Wallonia Regional Investment Company (SRIW).

\*\* The Group has been awarded ISO 9001, ISO 14001, ISO 22000 and OSHAS 18001 certification, combining quality, environmental and safety requirements. Prayon has also implemented the HACCP method for its food production lines.

# Product range

## Food applications

### Process cheese

An essential additive for any cheese processor, KASOMEL® emulsifying salts ensure optimal control during emulsifying and cooking processes and guarantee a high quality finished product.



### Baked goods

Acid phosphates are well-known leavening agents in dough. They react with bicarbonate of soda to produce a controlled release of gas, which enhances the volume, appearance and flavour of pastries.



## Meat products / delicatessen

CARFOSEL® salts react with proteins in a unique way ensuring that processed products retain their nutritional qualities and natural flavour, colour and texture.



## Fish and seafood

CARFOSEL® salts guarantee excellent retention of natural juices in fish fillets, prawns, scampi, scallops and other frozen seafood. They also help to prevent struvite crystals from forming in canned tuna and crab.



# Product range

## Food applications

### Potatoes

During potato processing, the appearance of black spots linked to complexation of iron with phenolic compounds is a well-known process. By acting on the ferrous ions, the sodium acid pyrophosphate halts this reaction to produce a high-quality finished product.



### Vegetables

Phosphates soften the skin of beans, peas and lentils (tinned or frozen), reducing their cooking time. Processing vegetables in this way also prevents colour changes (the same as with potatoes). They also improve and control the viscosity of sauces and tomato purées, and increase the amount of juice obtained from tomato pulp.



### Noodles

Phosphates make instant noodles more flexible and preserve their flavour. Our blends speed gluten interaction, make noodles more elastic and also ensure clearer water when cooking.



## Cereals

Phosphates are used in cereals as pH balancers or buffer agents. Phosphates improve flow of doughs during the extrusion process allowing the development of textured flakes. They are also a source of minerals.

## Mineral enrichment

Phosphate salts enrich all kinds of food with potassium, phosphorus or calcium. Tricalcium phosphate, in particular, contains high levels of calcium and has little effect on the food matrix. When soluble mineral salts are used, enrichment is combined with the use of a sequestrant phosphate salt allowing reactions with ions to be neutralised.

## Powdered foods

Tricalcium phosphate improves the flowability of products such as powdered milk, instant powders, spices etc. (anti-caking agent).

# Product range

## Food applications

### Drinks

Polyphosphates stabilise fruit drinks and vitamin C in citrus fruit drinks. Calcium and potassium phosphates add minerals (calcium, potassium and phosphorus) to energy drinks. Phosphoric acid is also added as an acidifying agent in soft-drinks like cola.



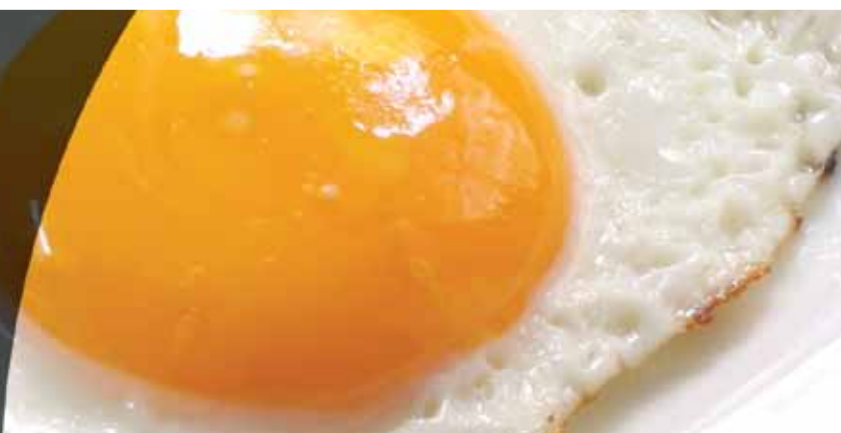
### Fats and oil

Phosphoric acid and its derivatives are used in processing oils and fats used in foods. They are used to extract de-gum oils during the refining process, to stabilise fats, to protect against loss of flavour and to obtain stable emulsions.



### Egg products

Phosphates improve the functional properties and processing of eggs. They bind unwanted metallic ions, act as buffering agents to achieve optimum pH values, optimise the volume and stability of beaten egg whites, inhibit enzymatic activity, retard growth of micro-organisms and slow discolouration.



## Modified starch

Purified phosphoric acid and various phosphate salts act on starches. They are used in industrial starch modification processes and to develop specific properties. A recent application in this area is the development of modified starch that is rich in soluble fibre and therefore ideal for low-carb diets.



## Petfood

By stabilising bonds between water and proteins, phosphates make food appealing for cats and dogs. Purified phosphoric acid and phosphates are used to modify proteins in the development of desirable petfood flavors.



## Toothpaste

Calcium phosphates are used as polishing agents and boost remineralisation potential. Sodium phosphates prevent tartar from building up and improve the whitening effect. Sodium fluoride is used in dental products as a fluoride supplement.



The PRAYON food applications laboratory develops products specially adapted to the ever more complex needs of the food industry. It responds in the best way possible to developments in the market and to all requests from the sector.

Focusing on meat processing, process cheese production and industrial baking applications, the laboratory constantly develops its expertise and the performance of phosphates to be used in multiple food applications.

The laboratory regularly organises training and information sessions on the use of phosphates in different areas.

The laboratory also provides clients with scientific information and technical support in the use of phosphates.



## Phosphorus

Phosphorus is present in the human body at a ratio of 6-12 g/kg and is just as vital to human life as calcium, nitrogen, carbon, hydrogen and oxygen.

Phosphorus plays an important role in many biochemical processes and is a basic element in our bones, teeth and nervous system.

For example, phosphorus is a basic element of DNA, the substance which allows us to pass on our genetic heritage.

Phosphorus also plays an important role in all physical and mental activities. It is the main element in ATP (adenosine triphosphate), the energy reserve in our cells which helps in contracting our muscles, transmitting nerve impulses and regulating our body temperature.

Phosphorus is a mineral and therefore cannot be produced by the body - like calcium, it must be provided by external sources.

Phosphate salts serve a duo process by stabilising various foods and by providing dietary phosphorus.

Tricalcium phosphates are even more advantageous as they provide both calcium and phosphorus, thus improving the nutritional quality of many different products.

The FAO\* established the ADI\*\* for phosphorus at 30 mg/kg i.e., around 2000 mg per day for an adult.

As an indication, various studies in Central Europe have shown current phosphorus intake to be around 1300-1400 mg per person in that region.

\* FAO: Food and Agriculture Organization of the United Nations

\*\* ADI: Acceptable Daily Intake






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