



PECTIN IN HEALTHCARE PRODUCTS

FROM FOOD TO PHARMA

Pectin is a fibre found naturally in plants, especially fruits such as apples, oranges, lemons and limes. As well as being widely used as a food ingredient, pectin has a number of applications in the healthcare sector, where it acts as a gelling and film-forming agent. It also delivers superior water-binding capabilities and offers resistance to acids.

All these properties make pectin a useful ingredient for a range of pharmaceuticals, medical nutrition products and medical devices. It is suitable for use in formulations and products intended for both internal consumption and external application.

As well as its superior functionality, pectin is also a popular component for healthcare products because it is sourced from nature, is completely safe and is fully biodegradable (and therefore environmentally friendly).



SUSTAINED-RELEASE CAPSULES

In pharmaceutical applications, pectin is used to promote the sustained release of medication in order to ensure the delivery of treatment in a controlled manner.

Enteric drugs are a good example of this. Medical capsules are normally dissolved by the acid in the stomach – and in many cases, this is perfectly fine. However, enteric drugs must be released in the intestine in order to be effective, which means they need to survive the harsh stomach environment. Coating these capsules with a formulation containing pectin ensures they will remain insoluble in the stomach acids, passing through the stomach to dissolve in the intestine.



MEDICAL NUTRITION

Nutrition plays an important role in healthcare, especially in the treatment of older patients and those recovering from serious illness or an operation. There are many medical nutrition products specially designed for people with these special needs, and the texture of these is very important. A pleasant texture will encourage patients to consume the correct quantity of a product so as to achieve optimal levels of nutrition and aid their recovery.

Texture is especially important for patients affected by dysphagia, a swallowing disorder that can occur in people of all ages and for many different reasons. In such cases, patients will usually be given specialist dysphagia diet solutions. The texture of these is of critical importance to ensure they are acceptable to patients. In these formulations, pectin can help to deliver very specific textures, providing the right viscosity and acting as gelling agent in a range of solutions, including soft foods and products designed for tube feeding.

Pectin also makes an excellent stabilizer in acidic, protein-rich formulations, which are often prescribed to treat senior patients affected by sarcopenia, an age-related muscle-wasting condition. In these applications, pectin prevents the proteins from coagulating and curdling during processing and storage.



SKIN PROTECTION

In healthcare solutions designed for external use, pectin delivers a buffering effect that controls the pH of the skin. This action means it can preserve the skin's acid mantle, the very thin film that acts as an important barrier against contaminants such as bacteria and viruses that might otherwise penetrate the skin.

Pectin's gentle, skin-friendly properties mean it is widely used in specialist adhesives for ostomy care products. These adhesives help to maintain close contact between the ostomy bag and the surface of the skin, keeping the ostomy bag in place and protecting the skin from exposure to stomal effluent.