Fruit preservation with an edible pectin gel with a low glycemic index

CSIC has developed a fruit coating gel consisting of low methoxy and calcium pectins. The gel is an edible protective coating that increases the shelf life of the fruit during storage, slows microbial growth and has a low glycemic index.

Industrial partners from food companies are being sought to collaborate through a patent licence agreement.

An offer for Patent Licensing

Coating with edible film

The coating of pectins is an alternative to reduce the losses due to deterioration of the fruits. The protection is carried out through a control of oxygen transfer, a reduction in ethylene production, and the improvement of the mechanical properties of the fruit.

Pectins are soluble dietary fiber obtained from a plant material or from a by-product of the food industry (eg. sunflower chapters).

The coating of the fruit is a film of low-methoxyl pectin and calcium in low content, which allows a maintenance of the microorganisms within the established limits and an increase of the useful life of the fruit during 12 days of storage at 4 °C.

Blueberry fruits

Main innovations and advantages

- The process of obtaining, purifying and producing the coating is controlled allowing the characteristics of the coating film to be established.
- Pectin can be obtained from a wide variety of plant materials or by-products of the food industry (grape marc, olive marc, sunflower chapters, tomato pulp, etc.), and can be used in a wide range of fruits (cranberry, cherry, strawberry, etc.).
- The edible coating obtained in gel form is characterized by a percentage of pectin, calcium and sweetener and by presenting a low glycemic index.

Patent Status

Priority patent application filed suitable for international extension

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