

#### "Edible Coatings Containing Functional Ingredients and their Use for Increasing the Shelf Life of Food "

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# **Technology description**

The edible coating subject matter of this invention consists of a poly- $\xi$ -caprolactone nano-capsules dispersion containing an anti-oxidant or other functional ingredient. Xanthan gum is used as a matrix in order to obtain a homogeneous film. Propylene glycol is used as plasticizer with the aim of providing the film with flexibility. The coating is applied by dipping on freshly cut fruits and vegetables.

#### Applications, usage and benefits of the technology

*Haemonchus contortus* is the most important blood-feeding parasite in grazing sheep production, causing millions in economic losses. Moreover, the continuous use of chemical compounds for its control has led to the development of multi-drug anthelmintic resistance, making it necessary to develop new methods for its treatment and control.





### **Technology readiness Level**

Experiments have been conducted in cut apple, mango, melon and pineapple packed in glass styrofoam cups. Such cups were stored at 4 ° C and monitored for 21 days. Its been managed to establish that the nanocapsules formulation loaded with  $\alpha$ -tocopherol and  $\beta$ -carotene contribute to the product conservation with the less quantity of juice drained and better maintenance of texture and color.

## Market information



The market of minimally processed fresh fruits and vegetables is growing at a worldwide level. México is not an exception, since PROMEXICO calculates that this market grows 10% annually.

