Ingrid AGUILO-Aguayo

Dr. Aguiló-Aguayo a terminé sa thèse à l'UdL en 2010 dans le domaine des nouvelles technologies végétales de transformation des aliments. Elle a ensuite effectué un stage postdoctoral de cinq mois à INRAE (France) et a remporté en 2011 une bourse Beatriu de Pinós pour un stage postdoctoral à Teagasc (Irlande) dans le domaine de la transformation des aliments végétaux et de la revalorisation des sous-produits végétaux. Grâce à Beatriu de Pinós, elle a pu rejoindre le programme post-récolte de l'IRTA pendant un an et en 2015, elle a obtenu un Ayudas para contratos para la Formación Postdoctoral (anciennement Juan de la Cierva). A la fin de son contrat, elle est embauchée par l'IRTA en tant que chercheuse postdoctorale junior. En février 2018, elle obtient l'une des bourses du contrat Ramón y Cajal dans le domaine de la technologie alimentaire, dont elle bénéficie actuellement. Depuis qu'elle a rejoint l'IRTA, elle a attiré d'importants financements nationaux et internationaux grâce au réseau construit tout au long de sa carrière de chercheur. Elle est actuellement coordinatrice d'un projet EU-PRIMA qui explorera les légumineuses et les fruits à coque de la région méditerranéenne pour développer des produits à haute valeur nutritionnelle et gastronomique riches en protéines.

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Valorization strategies to obtain high-quality processed vegetable products

Abstract

The challenge to develop high quality processed products while achieving consumer expectations has led to explore innovative preserving and processing technologies. Producers are now a days very interested in promoting their fresh products and they have started to explore different processing valorisation routs to be more competitive in the market. Some examples are the use of controlled atmosphere to prolong the quality of fresh fruit and vegetables during the postharvest shelf life representing a potential tool to managing the further fresh-cut product production. The production of fresh-cut products is increasing due to the modern consumption trends but minimal processing operations such as peeling and cutting cause wounding that significantly reduce their shelf-life. In this sense, new strategies including alternative sanitation treatments based on ultraviolet-C light or application of thermosonication or application of natural plant extracts with antioxidant and antimicrobial activities has showed potential to be incorporated in these range of products. Some of these technologies can also be used for waste and by-product valorisation and reintroduce in the food value chain. By-products derived ingredients with antioxidant or antimicrobial properties could also be used to extend the shelf-life of processed fruits and vegetables. On the other hand, edible coatings are an effective way to maintain freshness of fresh-cut products, extending their shelf life and acting as alternative to modified atmosphere packaging to be used. New hydrocolloids such as aloe vera in combination with ferulic acid could contribute to enhance product safety in fresh-cut apples. Vegetable producers are also aware of the increasing demand for plant-based products with special attention in seeking alternative sources of protein. This open an opportunity for different species of legumes that has been exerted to have excellent techno-functional properties, which include emulsifying and foaming characteristics. These quality aspects are well received for plant-based producers who are seeking for alternative protein sources and ingredients for mimicking meat, sea and dairy analogues.