



ADDCOMP HOLLAND BV is partner in FP (Seventh Framework Programme) project PLA4FOOD

PLA4FOOD proposal deals with the development of innovative active and biodegradable packaging for fresh-cut food products based on renewable resources thermoplastic materials (PLA-poly(lactic acid)). Fresh Cut Products category refers to fresh vegetables, fruit and market garden products without thermal treatment, prepared, washed and packaged without the incorporation of additives or preservatives and, as an essential requirement, demands the maintenance of the cold chain for its perfect conservation and has a shelf life of approximately 7 days.

ADDCOMP HOLLAND BV is active in this project as compounder of materials functionalised with the synergic addition of additives from natural sources (antioxidants, antibacterial and antifungal) in order to increase the shelf-life of packed products. Different encapsulation routes will be tested to protect active additives from processing conditions and to have controlled migration rates. Additionally, to minimize PLA current limitations in flexibility, water barrier properties and processability different additives will be studied including bio-based lactic-acid plasticizers, inorganic nanofillers and organic nucleants. Co-extrusion techniques (blow-film and cast-sheet and thermoforming) will be developed to obtain multilayer structures from different PLA formulations, in order to achieve the best cost/benefit ratio and optimal performance of the active packaging by controlling the thickness and crystallinity of each layer. As a result of this combination of material advances and processing technology improvements, a high performance active food packaging beyond of current state-of-the-art will be obtained. The new active and biodegradable packages from renewable sources will provide minimal processed fresh-cut products adequate protection against environmental agents, will improve product properties (quality, shelf-life, microbiological safety and nutritional values), and moreover, will degrade in composting conditions according to the standard UNE-EN 13432

For more information: <http://www.aimplas.es/proyectos/pla4food/>